HIC ET UBIQUE

"HERE AND EVERYWHERE"

# The Romance of Printing Ink

## A Story of the Development of Inks as applied to the Printing Industry - Issued by

## Ault & Wiborg Company of Canada - Limited

with samples of various Inks they manufacture

Library
of the
University of Toronto

# Foreword

FROM 1878 to the present day, an unbroken record of constant and unswerving devotion to an IDEAL.

Such is the record of the Ault and Wiborg Company, the largest manufacturers of Printing Inks in the World.

A Business built on System, by the reduction of every activity to a strictly scientific basis, by a rigid adherence to High Quality and Efficient Service, the two component parts of that Ideal which was set up in 1878 and has been followed ever since.

To-day, as in 1878, an unbroken record!

In introducing the reader to the following pages with their interesting details of the growth and conduct of this great business, we may draw attention to the tremendous growth of the Printing business in the last two decades, the introduction of an enormous variety of new paper stocks, each calling for Printing Inks to suit its individual characteristics, and the rapid changes in Printing Machinery and its operation.

To meet every new and changing condition both of paper and press, our staff of research chemists is constantly at work. Starting in 1878 with [illegible] the most famous analytical chemist of his day, we have employed men of special training and wide experience to conduct the tests and research work necessary to our own evolution. We adhere to a process only until we have been able to evolve a better one, and our continual effort has enabled us to keep pace with each advance in the evolution of Printing Machinery and Paper stocks,—to be ready and waiting with the correctly proportioned and balanced Ink to meet the new demand.

No order is too large for us, and the acceptance of an order carries with it the assurance of prompt delivery. We pride ourselves on having an ink suitable for every job, no matter how wide the variety or how unusual the method or material used. We invite full details of the job, as we are thus able to meet the requirements most exactly.

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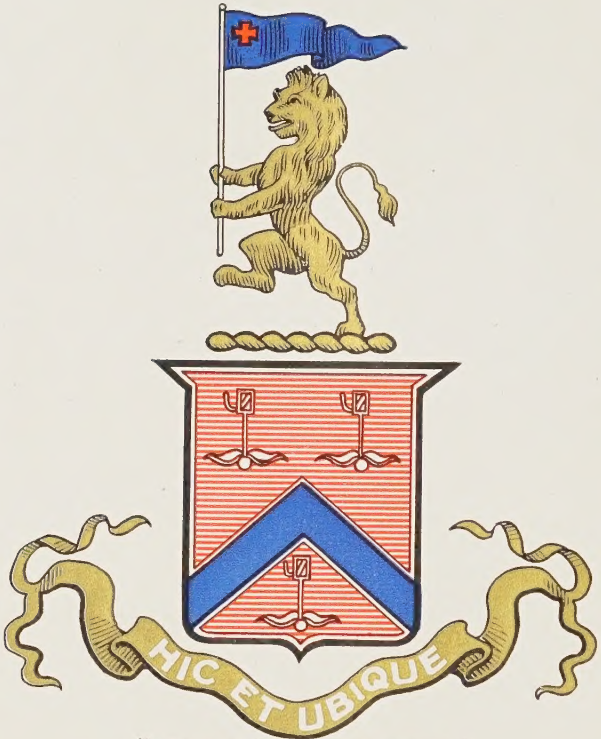


"HERE AND EVERYWHERE"

Process Yellow 10647
" Red 11471

Process Blue 10085
" Black 11442

# The Romance Of Printing Ink.

A REVIEW of the Evolution of almost any definite Article in general use at the present day, traced from the days of its inception to the present time, will present many romantic features, and this is particularly true in the consideration of Printing Inks, which are closely allied with the development of one of the most important, if not quite the most important item in the progress of all the ages.

All civilizations, past, present and future have been and will be built by the direct agency of the "written word" without which progress would be impossible and the dissemination of knowledge would cease!

*Process Yellow 12451*
*" Red 10007*

*Process Blue 10592*
*" Black 11442*

*Passing rapidly over the ages we find first the registration of thought upon a rock or stone, the skin of an animal or the bark of a tree; next, the stamping of clay tablets, which influenced the civilization of the ancient Babylonians and Persians,— the important discovery of papyrus by the Egyptians, who were the first to use it as a writing material, and, at a later date, the epoch making invention of paper by the Chinese.*

*The discovery and manufacture of a fluid substance suitable for the impression of metal stamps upon paper marked the first step in the actual evolution of Printing Inks, and gradually replaced the writing inks used by the old monks in the illumination of manuscripts, an art which, however, by virtue of its beauty, persisted for some time after the more mechanical stamping of printed characters had been commenced.*

*The first Printing Press used in what was then known as British North America was known as the Stephen Daye Press. This wooden Press was brought from England in 1638, and remained in operation in various parts of the country for about one hundred and fifty years, during which time other similar presses were made, and since which date the*

Process Yellow 10268
" Red 10306

Process Blue 11462
" Black 11764

*art of Printing has constantly developed by almost imperceptible stages, until, to-day, an almost inconceivable volume of all kinds of Printing in Black and every variation of Color is turned out by wonderfully complete machinery in every civilized country in the world.*

*And the Evolution of Printing Inks has through the years kept pace with the increase in Printing and with the improvement and gradual perfecting of every kind of printing machinery and equipment. The modern Printer, while he appreciates fully the importance of the inks he uses, may yet be inclined to accept their excellence as a matter of course, not realizing the amount of patient research and experiment which has led to the results gained.*

*In the earlier days of the Printing Industry, the alchemist devoted much time to experiment and to the testing and blending of various substances in the search for a combination which would be effective. This long history of patient research, marked by its occasional important discoveries of new substances and methods, has been one of the most important features in the development of the Printing Ink Industry, and there has never*

*Process Yellow 12481*
*" Red 10308*

*Process Blue 11656*
*" Black 11041*

*been a period in the evolution of the business when research work was a more important feature than the present time. During the last twenty-five years the changes and improvements introduced into the manufacture of Printing equipment and paper stocks have been so constant that the most active efforts of our chemists have been necessary to keep pace with the constant change in the nature of the demands made upon them. And the net result of all this work and experiment has been the almost perfect combinations now represented by Ault and Wiborg Printing Inks as standardized in four continents.*

*And this research, this testing and experimental work, still goes on. Nothing stands still, and perfect as Ault and Wiborg inks undoubtedly are, we still search for further possible refinements, further degrees of excellence, to add to the established reputation of the world's most famous Printing Inks.*

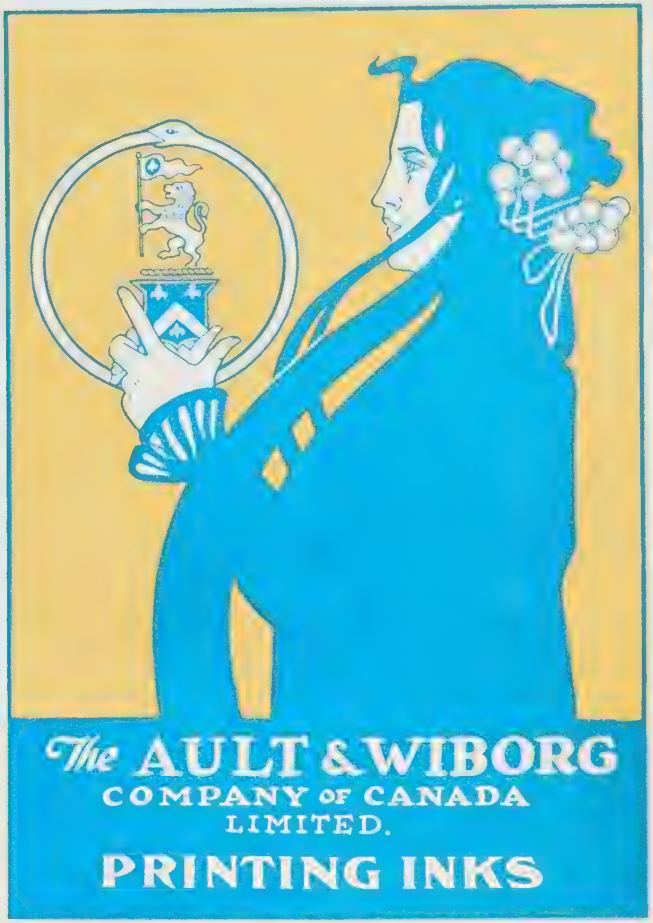
# A Chapter on Color Harmony

*THE subject of Color Harmony, or Color Balance, has long been considered purely a matter of individual judgment, and it was not known until comparatively recently, that the whole range of color harmonies is governed by a definite and well-established law of values, and the scientific treatment of this subject is far from being so complicated as would first appear to be likely.*

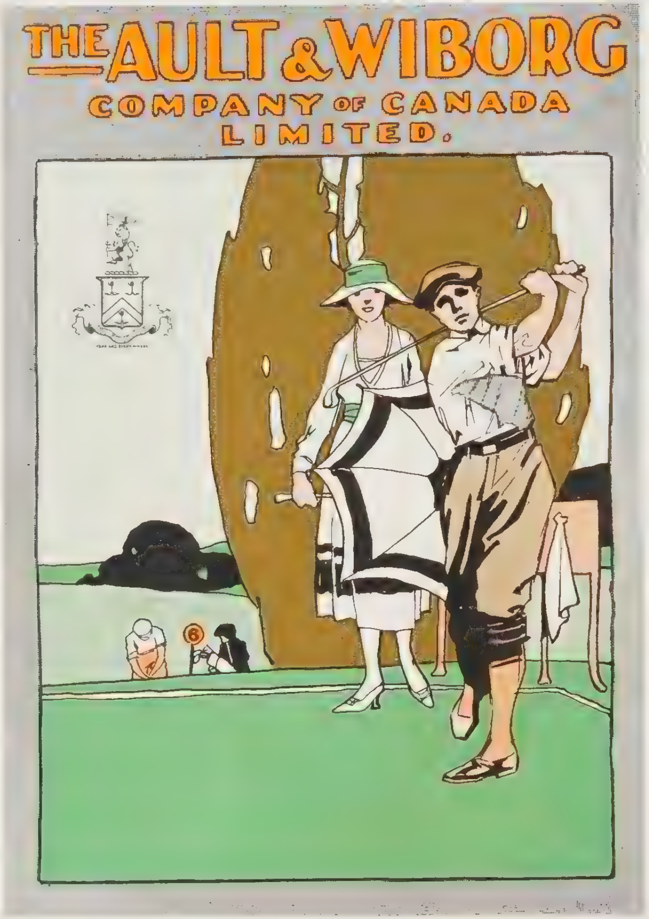
*In spite of the fundamental simplicity of the laws which have been found to govern color harmonies, this subject is far from being understood by the average printer, and certainly does not receive the consideration it deserves. As a result of this want of knowledge our eyes are constantly offended by unbalanced color values, which create discords instead of harmonies, and which very often unsettle, or even destroy, the actual balance of composition in the work.*

*From time to time the Printer is called upon to select or recommend color combinations suitable for work which is to be executed in their plant, and naturally the ink sample book is their first thought as a medium of guidance, leaving the eye to be the arbiter as to whether their choice is one of Harmony—or otherwise.*

*While the sense of sight will usually*



| | |
|---|---|
| *Buff Tint* | *12634* |
| *Peacock Blue* | *12623* |



| | |
|---|---|
| *Medium Green* | *10318* |
| *Persian Orange* | *11025* |
| *Halftone Black* | *11442* |

*detect any displacement of color balance, there are a few fundamental principles in color harmony, the use of which will immediately produce proper and pleasing Balance of Color.*

*As a basis for our guidance we will take the colors of the spectrum, five in number—Red, Yellow, Green, Blue and Purple, which are the primary colors, and with the five secondary colors being named for each primary color subject to the influence of the primary color which immediately follows it, we have in order Yellow-Red, Green-Yellow, Blue-Green, Purple-Blue and Reddish-Purple. We have thus divided the complete range of color into ten parts, each part being a distinct color.*

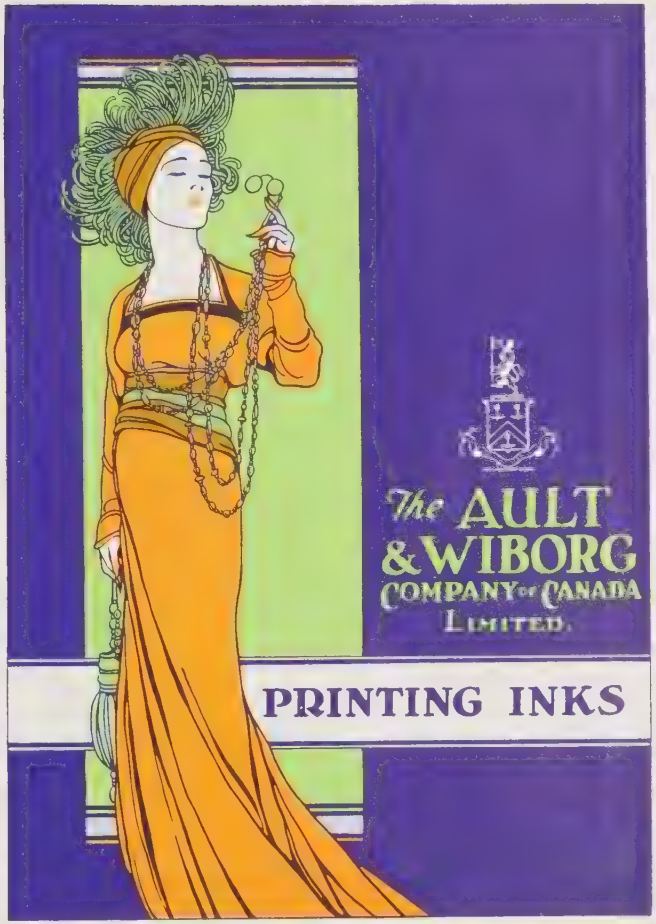
*Each of these colors must have a complementary color, or one that will produce perfect harmony if used together; thus Red harmonizes with Blue-Green, Yellow-Red with Blue, Purple-Blue with Yellow, Green with Red-Purple and Purple with Green-Yellow, so that the use of any of these combinations of color will produce a harmonious picture.*

*The Printing Trade, however, is mainly concerned with Color as applied to Advertising Illustration, color as a stimulant—and color as an attention-getter, so we may be allowed to depart from correct color combinations for the purpose of developing our interest getting elements, but this must, or should be, done without offending the senses, and thus interfering with that sensation of pleasure* *which should surely be the result of every color illustration used to promote individual interest.*

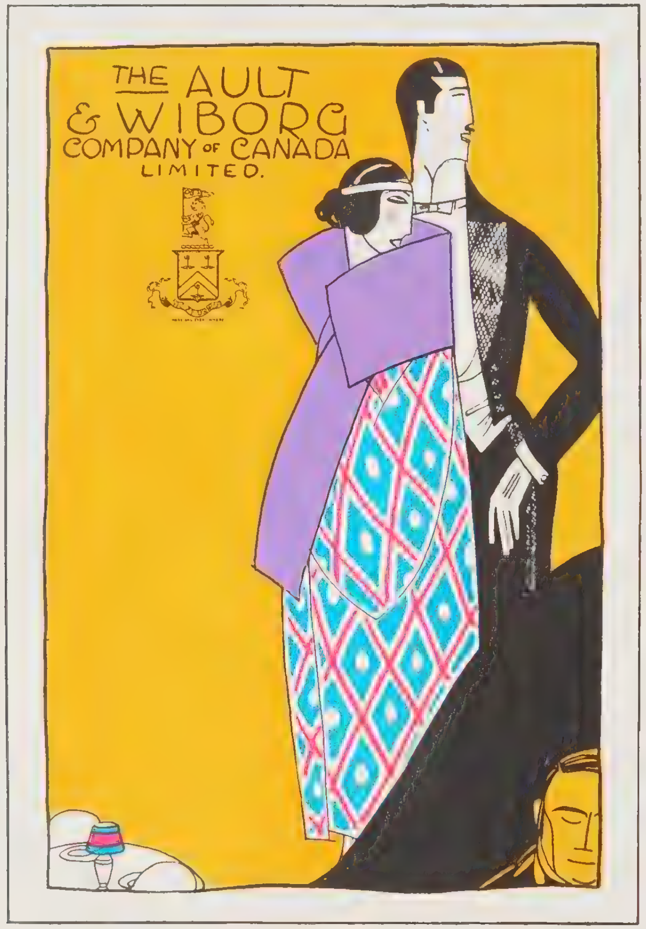
*The Artist and Designer, more particularly in the field of illustrated advertising, seeks for strong color effects which will attract and hold the attention at a given point in his composition, that point being selected as the point of strongest advertising interest or appeal. The result is always good in those cases where sufficient judgment has been used to correct the balance of the composition by the imposition of neutral tones of sufficient strength. Thus, if your subject requires a strong treatment of two or more glaring colors, they should be brought into harmony or balance by the introduction of a neutral background, using soft tints of Grey, Blue, Tan or Brown.*

*The Attention-Getting power of isolated color, not necessarily unbalanced, depends to a large extent upon the degree of isolation present. Let us consider a few well known examples;—The Red flag on the uniform Green of the golf course, the Orange sail on the trackless expanse of Blue-Green ocean, or the spot, almost Black by contrast, which stands for the distant oasis in the blinding Yellow glare of the desert.*

*These illustrations will serve to point one outstanding rule in the selection of color in the creation of advertising compositions, namely;—that if it becomes desirable to create an unbalance or isola-*



| | |
|---|---|
| *Reflex Blue* | *12476* |
| *Light Velvet Green* | *10769* |
| *Brilliant Orange* | *12791* |
| *Blue Tint* | *12792* |



| | |
|---|---|
| *Process Red* | *11471* |
| *Peacock Blue* | *11462* |
| *Orange Yellow* | *10128* |
| *Mauve Tint* | *12812* |
| *Half-tone Black* | *11442* |

*tion of color for the purpose of attracting the attention and holding it at a given point in the composition, this unbalance or isolation should be as far as possible confined to one spot. Two or more unbalanced centres are more than likely to be fatal to the success of the composition.*

*A spot of crimson surrounded by dark Green, Orange against Blue-Green, or Black with a field of Yellow will all produce striking and yet not unbalanced effects.*

*A knowledge of the basic rules underlying the subject of color-harmony, will not, at one step, educate the student of color fully, but it will go far towards an essential understanding of the subject.*

* * *

*"In the reproduction of each individual or national effort to secure the highest possible perfection of appeal through the medium of color, the Ault and Wiborg Company offer the Printing Trade their full co-operation, and that definite assistance which results from a close adherence to standardized purity of color, and the constant use of the finest materials. To which add, skilled and scientific supervision, testing and proving; a standard of quality rigidly adhered to, and an amplitude of production equal to any emergency; three essential elements in the merchandising of the world's most perfect Printing Inks."*

# Inks for the Printing Industries as developed by Ault & Wiborg Co.

AS this Book deals with "The Romance of Printing Inks" it may perhaps be opportune to remark at the outset that there is very little of this Romance apparent throughout the inspection of any of the manufacturing plants which comprise the immense organization of the Ault and Wiborg Company, from each one of which is gained a concrete impression of a blend of system, energetic work, and that degree of mechanical accuracy which is essential to the manufacture of any highly specialized and standardized commercial product. One might as well seek for Romance in the intricacies of cloth weaving machinery, instead of looking for it in the wearing of some dainty garment at a later date. The scientific blending and grinding of raw color materials, and the subsequent blending, testing and proving of our inks as they pass through the various stages of their manufacture offer but little suggestion of their ultimate use in the creation of beautiful examples of high-class modern printing and lithography.

The manufacturing plant of the Ault and Wiborg Company in Toronto is one complete unit of the Company's immense organization, and as such it is representative of the business as a whole. A brief description of the Toronto plant will therefore serve as a description of any one of the distinct plants which go to make up the Ault and Wiborg Organization.

Contrary to what may be the general impression, the Ault and Wiborg Company does not import or purchase those Pigments and Varnishes which are the basic constituents of Printing Ink. Our deliberate and consistent working towards the accomplishment of the highest possible ideal in Printing Inks precludes the possibility of leaving anything however small, to chance. To KNOW our Pigments and our Varnishes, we make them—a simple statement, but one of profound importance. And having made them, and knowing them,—we know exactly what they are capable of in any one of the multitude of combinations and variations rendered necessary in the present day by the immense variety of different machines and paper stocks used in modern printing.

There follows the adaptation of each special variety of Pigment and Varnish in combination to a succession of different uses, to a thousand paper stocks, each class of which requires an ink suited to it. And remember there IS an ink suited to each purpose, and that such an ink may be supplied if the conditions are plainly stated when the order is placed with us. There is no reason why a printer should experiment with certain inks for certain requirements, we have done all the experimenting which is necessary, and our accumulated knowledge is at his full disposal if he will avail himself of the privilege offered to him.

*The actual manufacture of the Printing Inks themselves may be briefly described as follows:—Each plant first selects and blends its basic elements, Pigments and Varnishes, which are then transferred to the grinding floors. Here the various combinations are ground to the necessary degree of fineness, after which they are run directly from the mixing machines into the cans in which they are ultimately to be shipped. But before these cans may be sealed, before they receive the O.K. which pronounces their contents to be worthy products of the Ault and Wiborg Organization, various other important formalities must be complied with. Samples are taken from each mixing machine, and each sample is promptly transferred to the Testing Rooms, where a staff of experienced analytical chemists put each sample through rigid tests for working properties, tinctorial strength, and various chemical reactions of importance. Thence to the Proving Rooms, where color standards are fixed, and where each sample must fulfil its claim as to shade and consistency. Any sample unfortunate enough to fail to pass the rigid color and shade tests of the Proving Room experts must commence its journey over again. Thanks, however, to the very well-known severity of the various tests applied in both these departments, it is not often that there is any marked deviation from the standard set, as the operators responsible for the successful issue of the initial stages of the work are fully aware of the immediate results of any deviation from the established schedule set for each purpose, however slight it may be. Samples which have passed the tests of these departments are then pronounced O.K., the batch from which they were taken is sealed, labeled and passed along to the shipping room, whence it goes out to the printing world to perform its useful work in the service of high-class printing or lithography.*

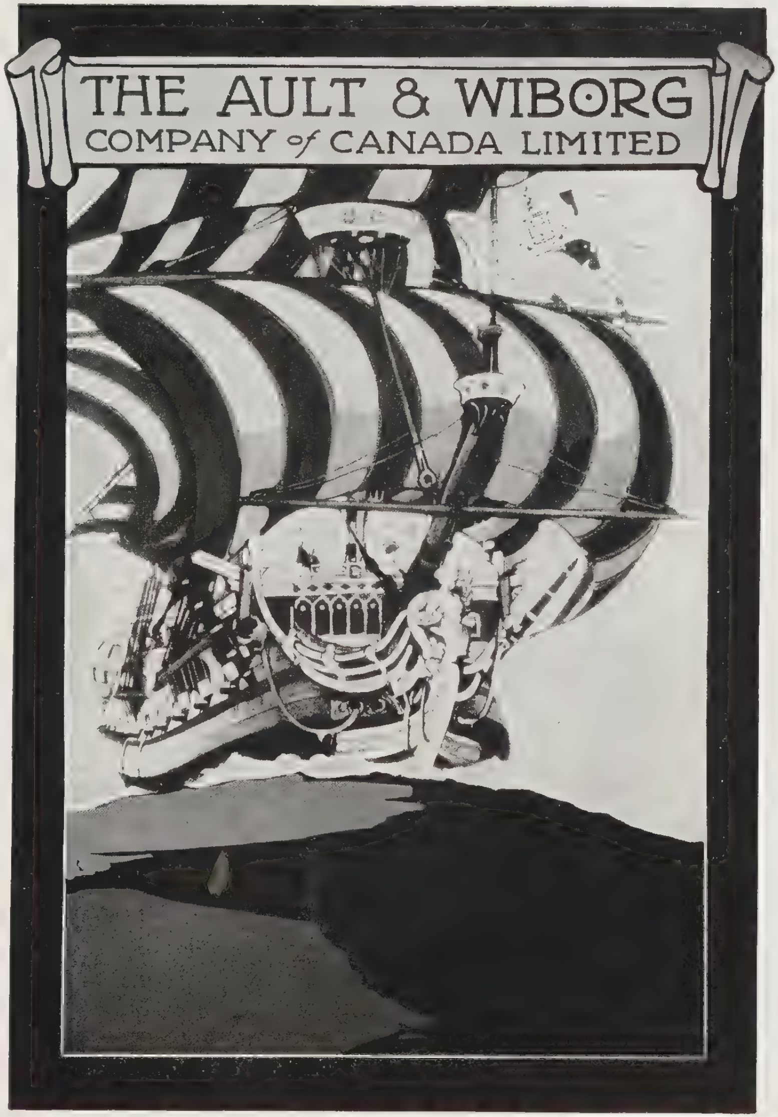
*Our illustrations show a partial view of one of the Grinding Floors, a corner of the Testing Room, a view of the Proving Room, and also a partial view of the Department devoted to the manufacture of IDEAL Rollers.*

*While there is undoubtedly a very close connection between the work performed by Printing Inks and the concurrent work performed by Printing Machinery as a whole, yet there is no other part of the Printing equipment quite so closely allied to the registration of color as the rollers themselves. The Ault and Wiborg Company, quick to realize the supreme importance of a roller good enough to be associated with their Printing Inks, selected IDEAL Rollers as those which more nearly approximated roller perfection than any others on the market. For some considerable time we have been manufacturing these Rollers in our own plants, and*

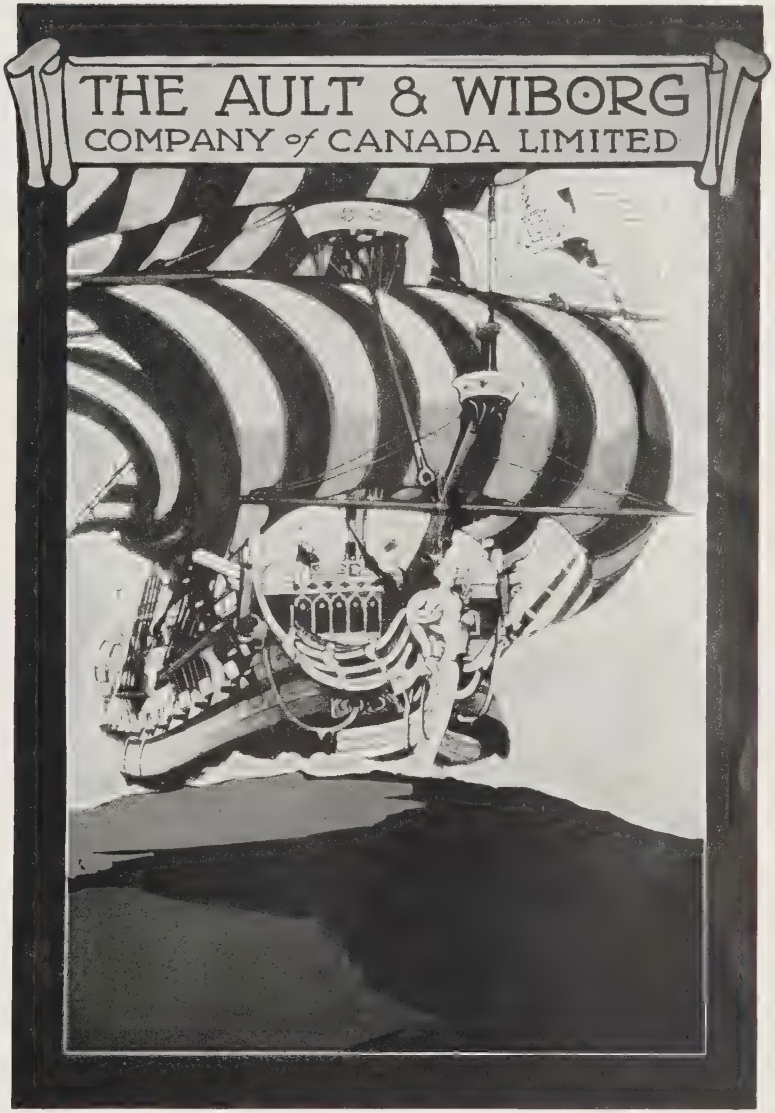
*the very cordial reception they have met with at the hands of the printers is a satisfactory indication of their excellence. We have used a little Printers' Ink ourselves in telling our customers the main facts about IDEAL Rollers and perhaps the success of our own advertising lies in the fact that we were able to make a few very definite statements in their favour and to promise every user of IDEAL Rollers a definite saving in production time and cost, and a complete immunity from all the troubles which beset the chequered career of the old style roller. For example,—that Ideal Rollers will not melt in hot weather or harden in cold weather in any climate in the world where printing is done —That they can be run at any press speed desired without danger of softening. That they are perfectly true and will always remain so,—that they are unaffected by water or humidity,—that they do not absorb inks or become cracked by inks or Pigments,—that they do not deteriorate when not in use, and that they have in both the Printing and Lithography trades, completely revolutionized the roller equipment. As IDEAL Rollers are made of vulcanized vegetable oils, and possess a permanent Life Suction or Tack, is it any wonder that the Printing Trades have accepted them with open arms, as the first worth while advance in Roller Manufacture in 150 years? It is a step forward in the Printing industry to offer the Printer and Lithographer that certainty of operation which is so much to be desired in a business which depends so absolutely upon precision for its successful operation.*

*A prompt Service, based upon the carrying in stock for immediate delivery of all standard lines, and a Shipping Department handled by Traffic men with a wide knowledge of classifications and rates, completes our brief review of our Plant. The Quality of our Product is taken care of at every step of our manufacture from the purchase of the highest possible class of basic raw materials right through to the finished product, a product which holds the esteem and confidence of every printer and lithographer in our immense list of customers. The purchase of the Basic Raw Materials is conducted on the immense scale befitting the business of the largest manufacturers of Printing Inks in the world, and, as a result, our first costs are very low, while our facilities for the selection and acquisition of the highest possible class of raw material are unequalled.*

*Duplex Dark Russet Brown 11337*



*Job Black, 10264*



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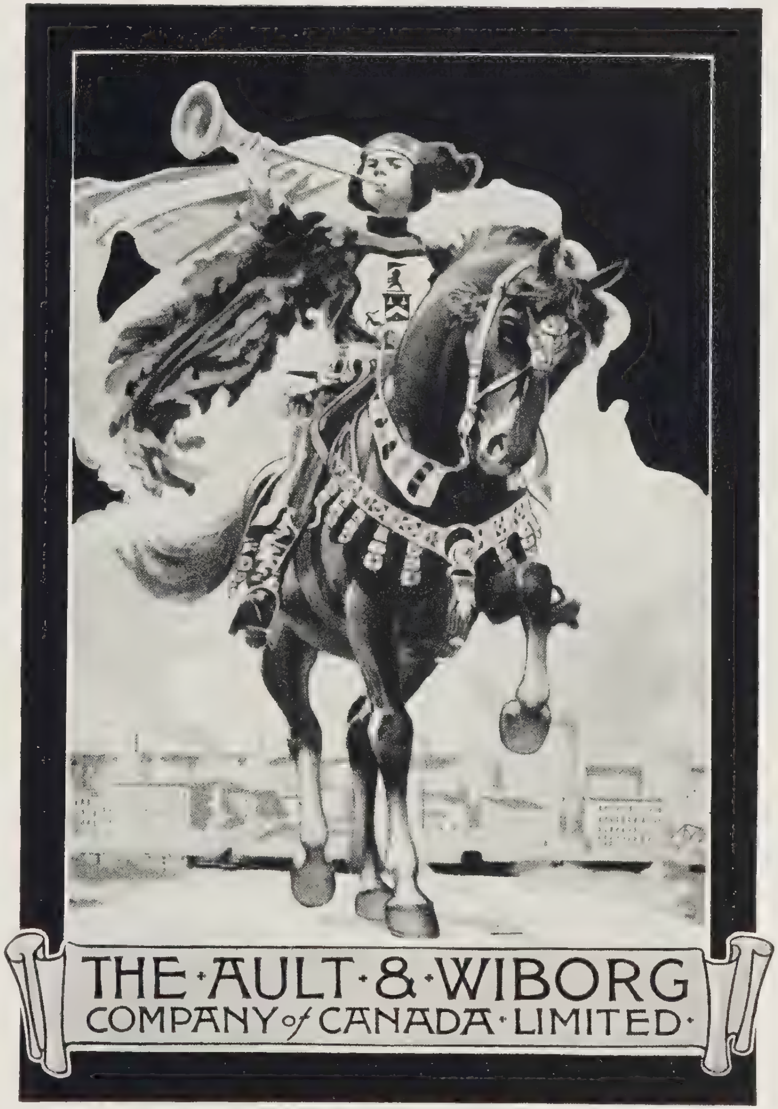
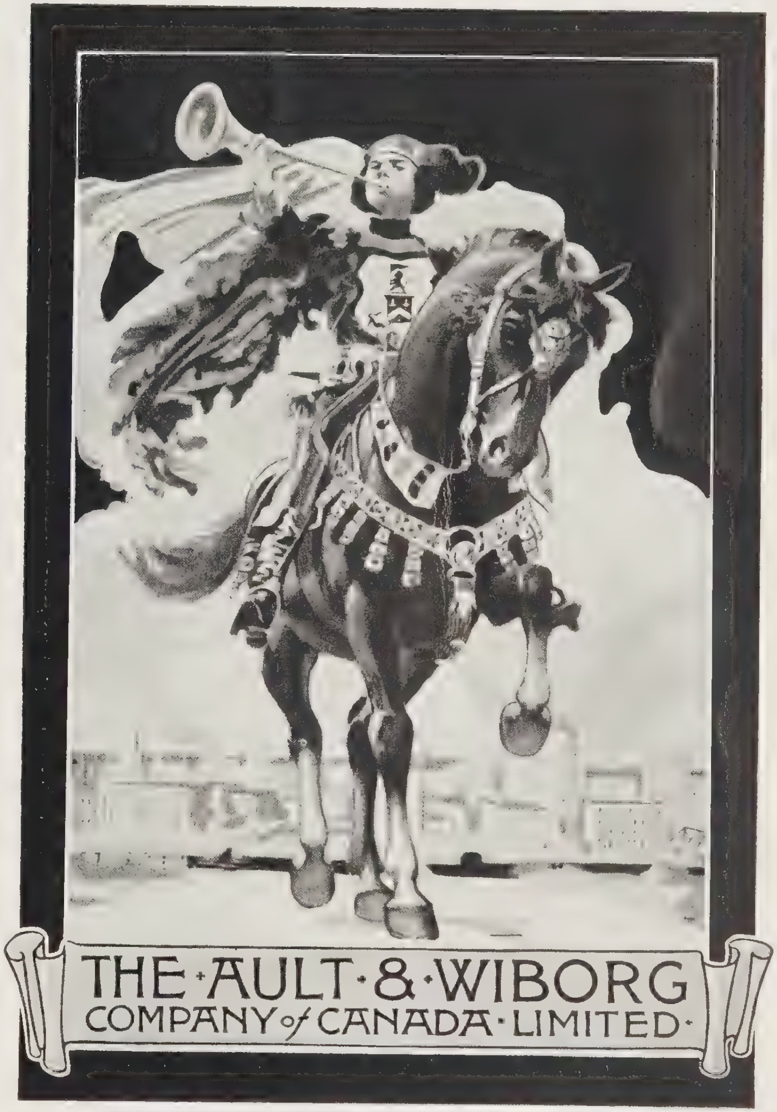
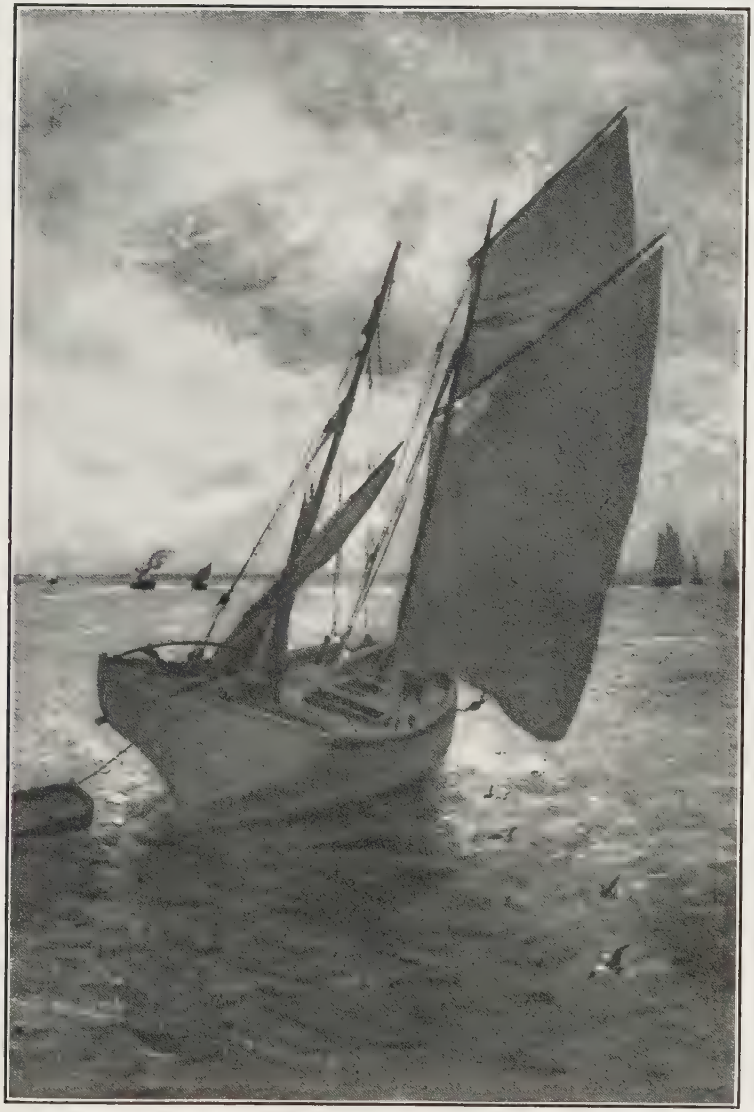


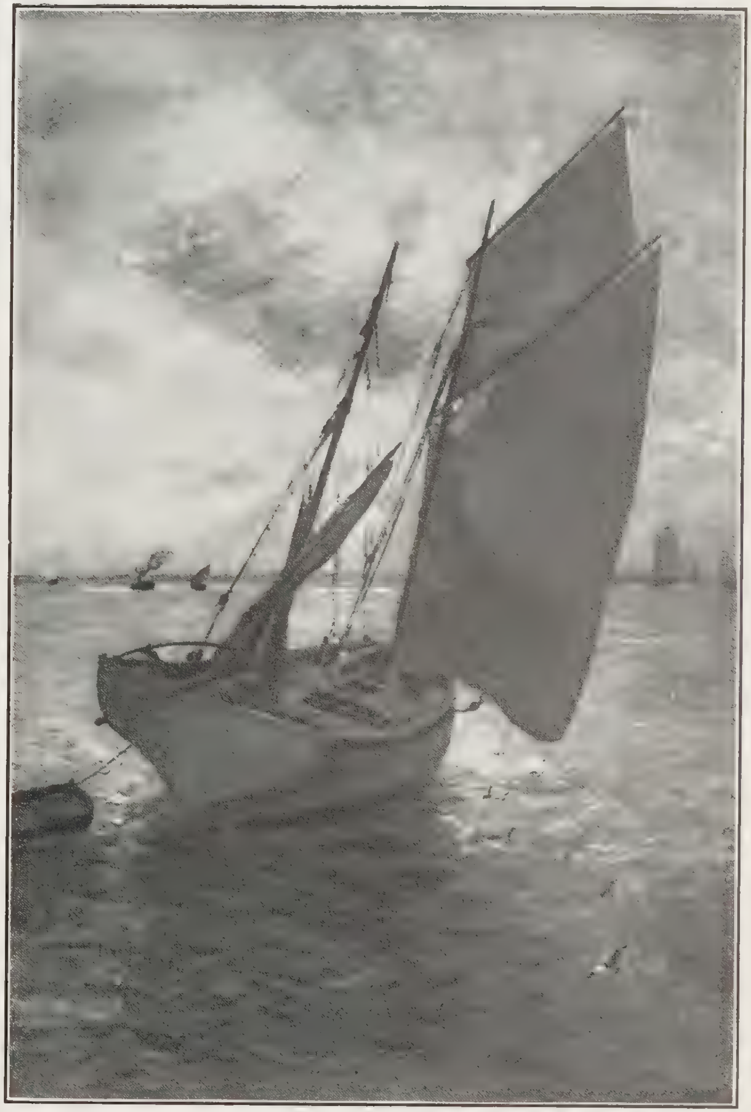
*Superior Job Black, 10255*



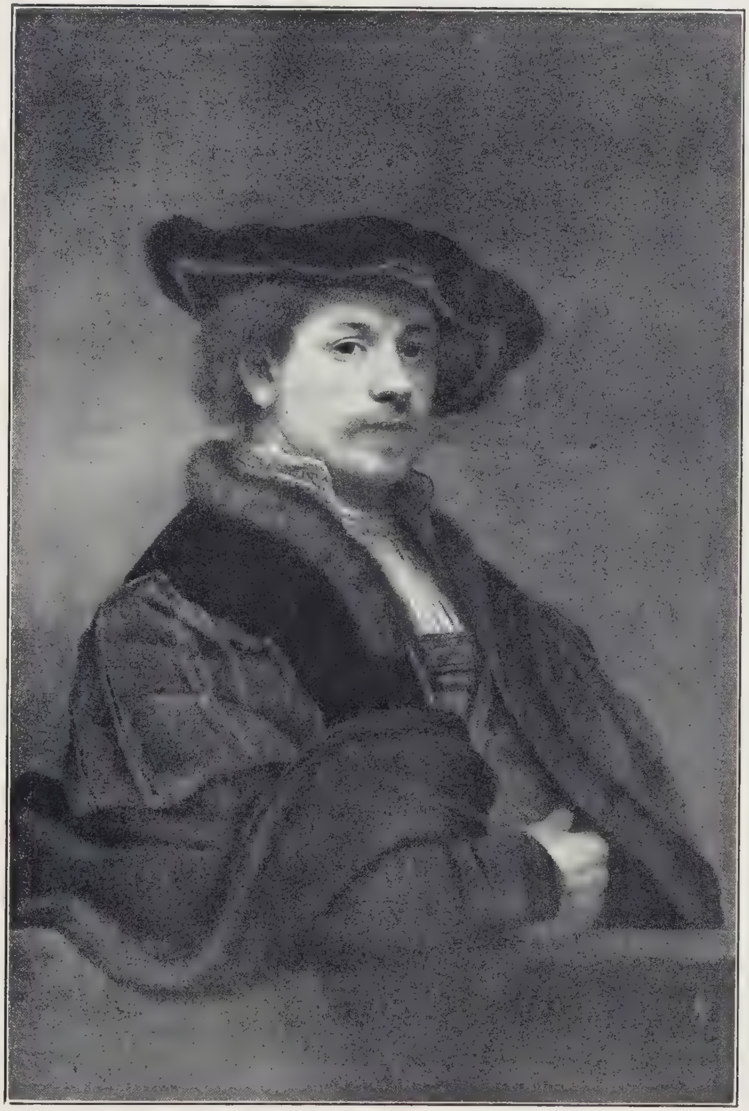
*"S" Black, 10108*



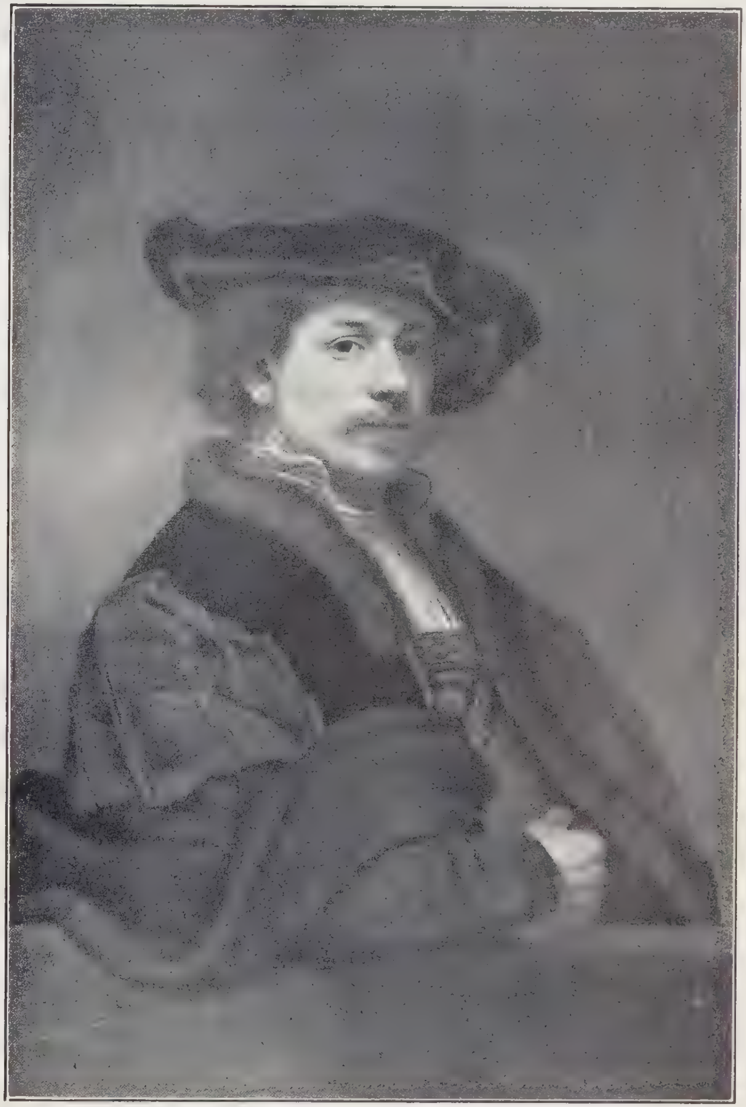
*Job Half Tone Black, 11442*



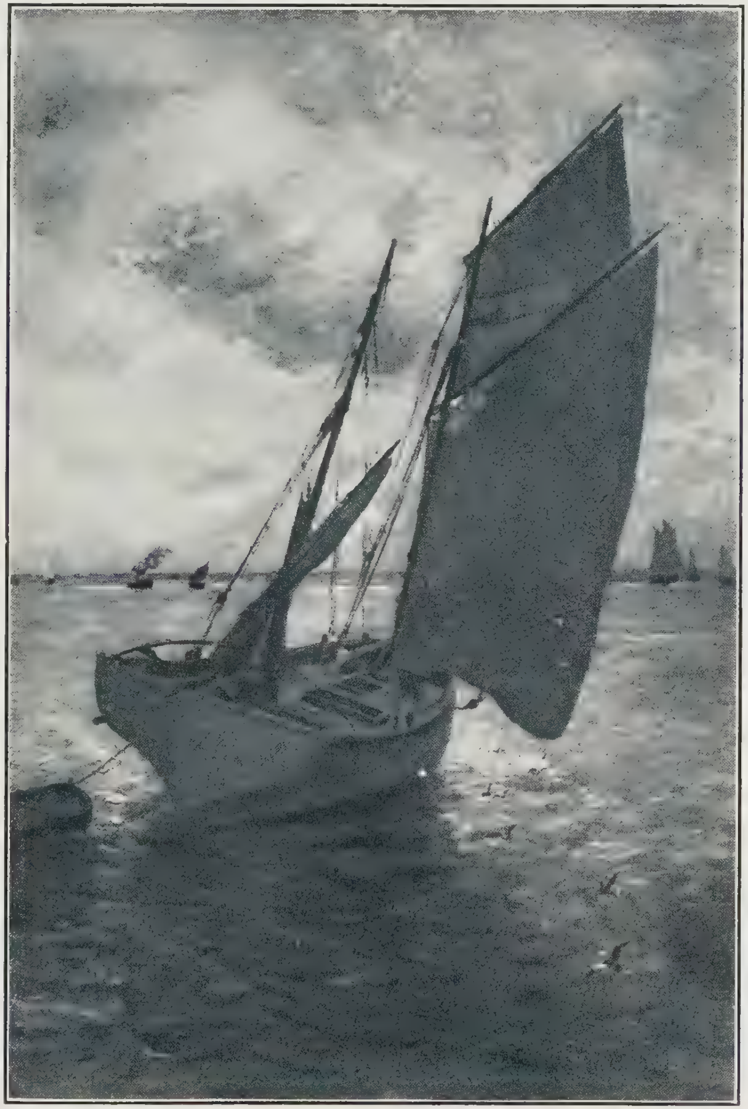
*Wonder Black, 13652*



*Soft Scientific Black, 13640*

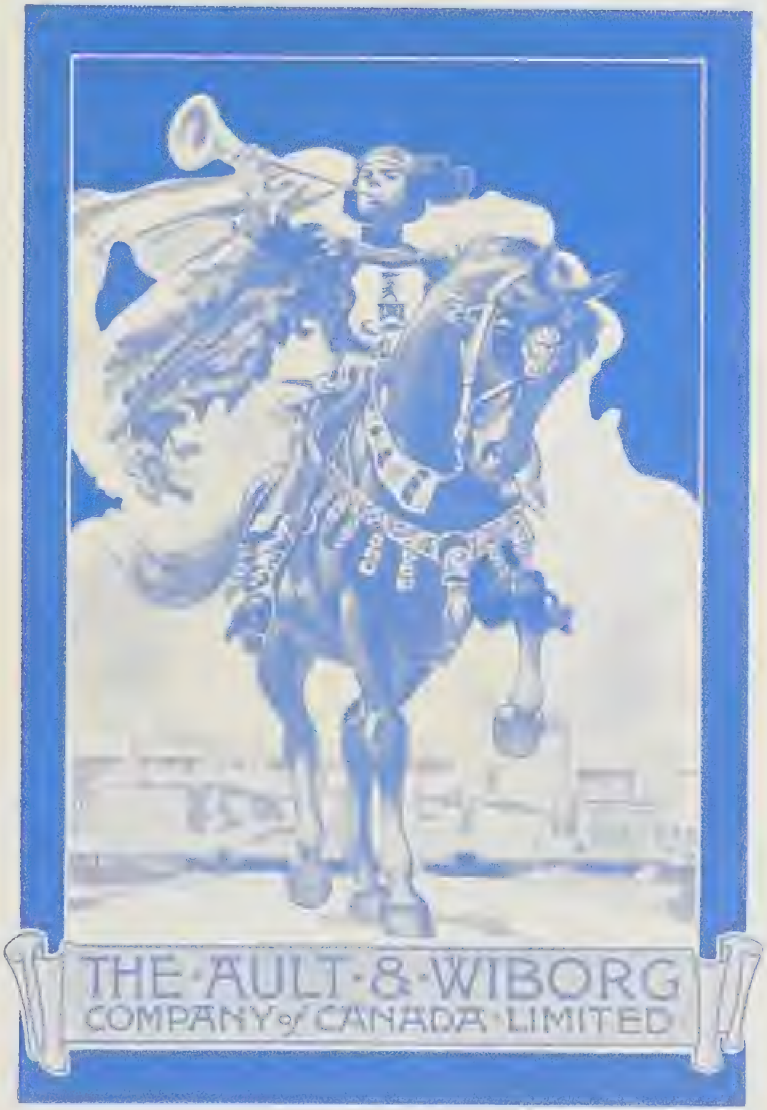


*Fine Halftone Black, 12787*

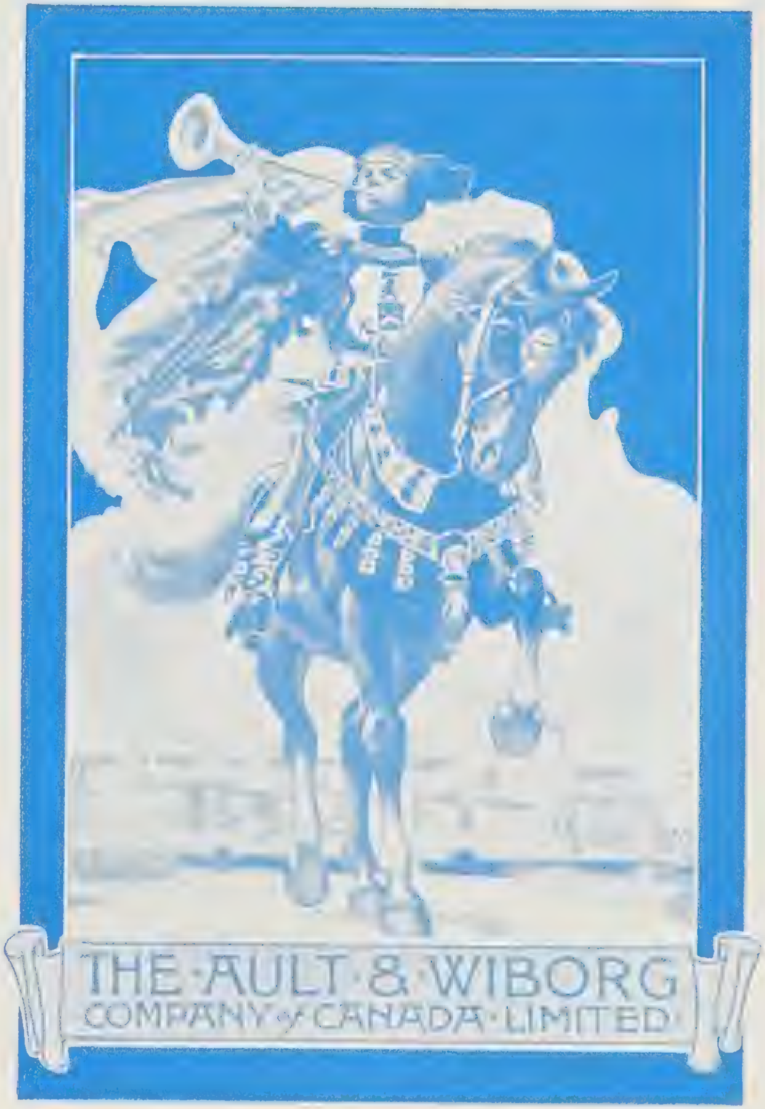


Green Black, 10387

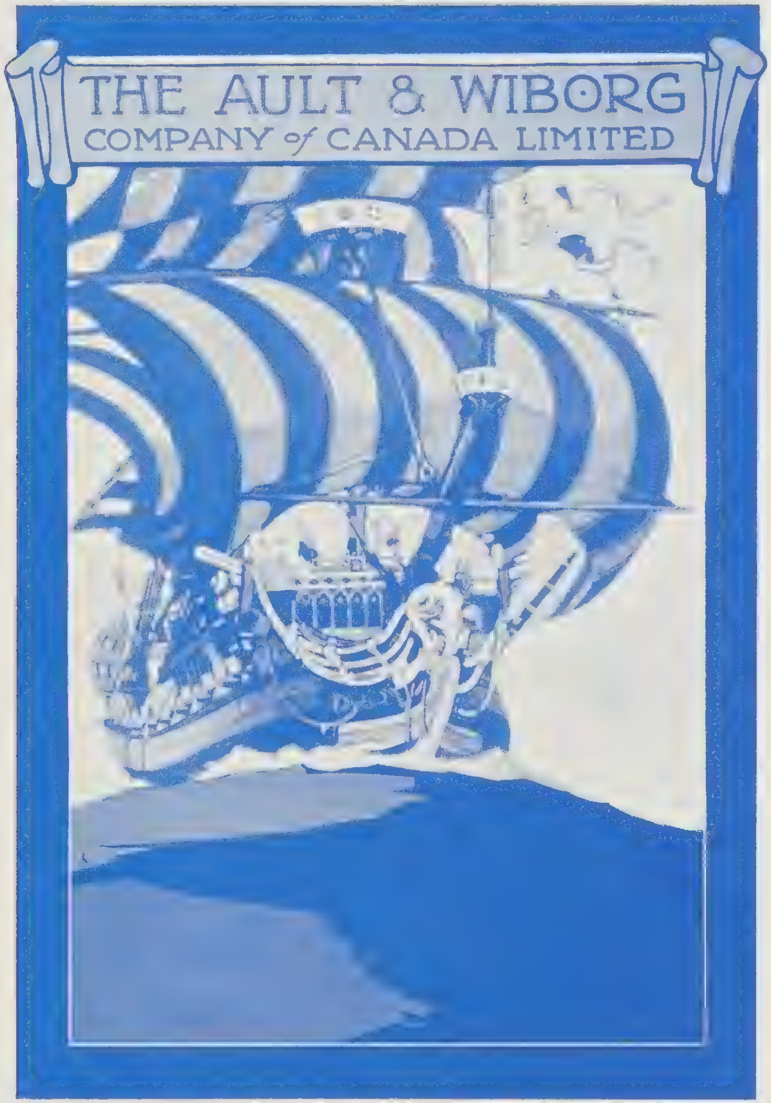
Bronze Blue Black, 10183



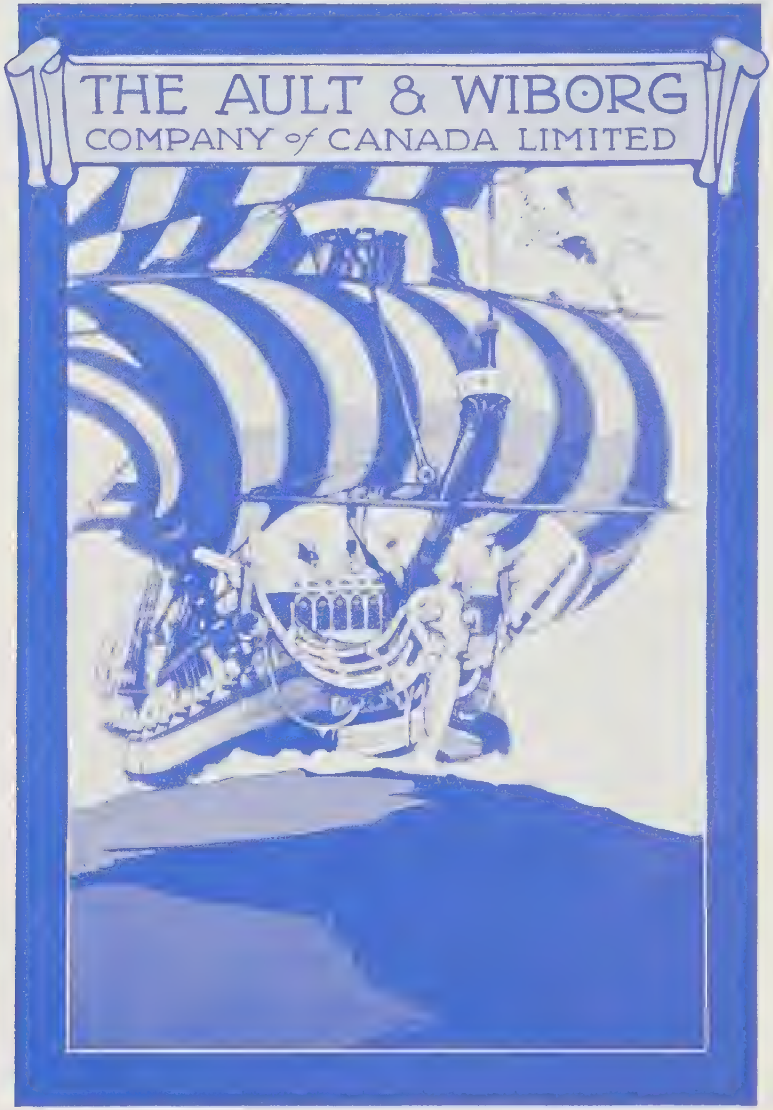
*Supreme Ultramarine Blue 12826*



*Imperial Blue 10280*

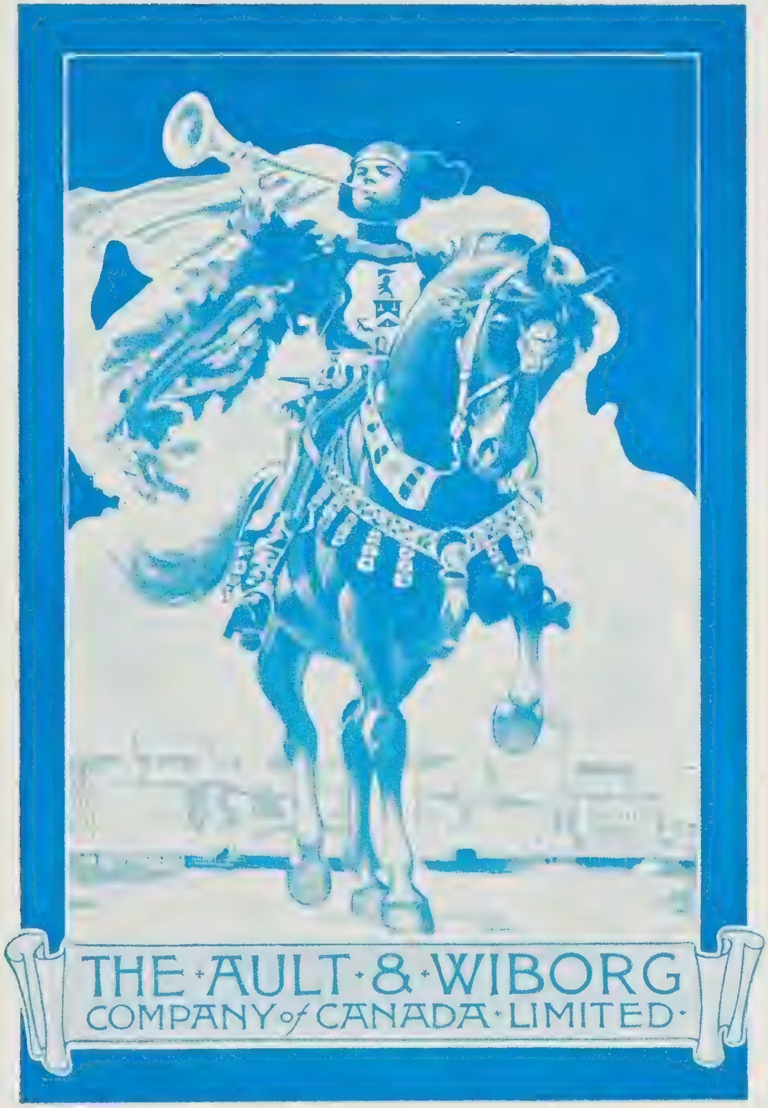


*Spec. Fine Blue 10285*

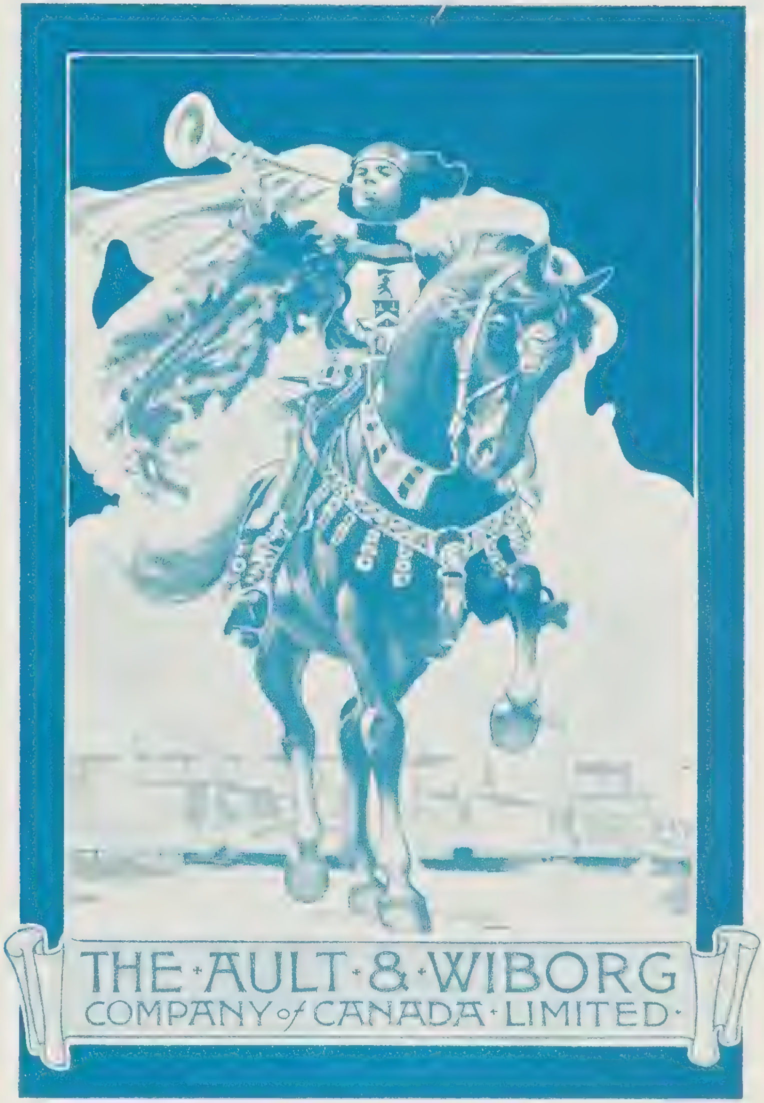


*Flag Blue 13101*

Darker



*Job Peacock Blue 12623*



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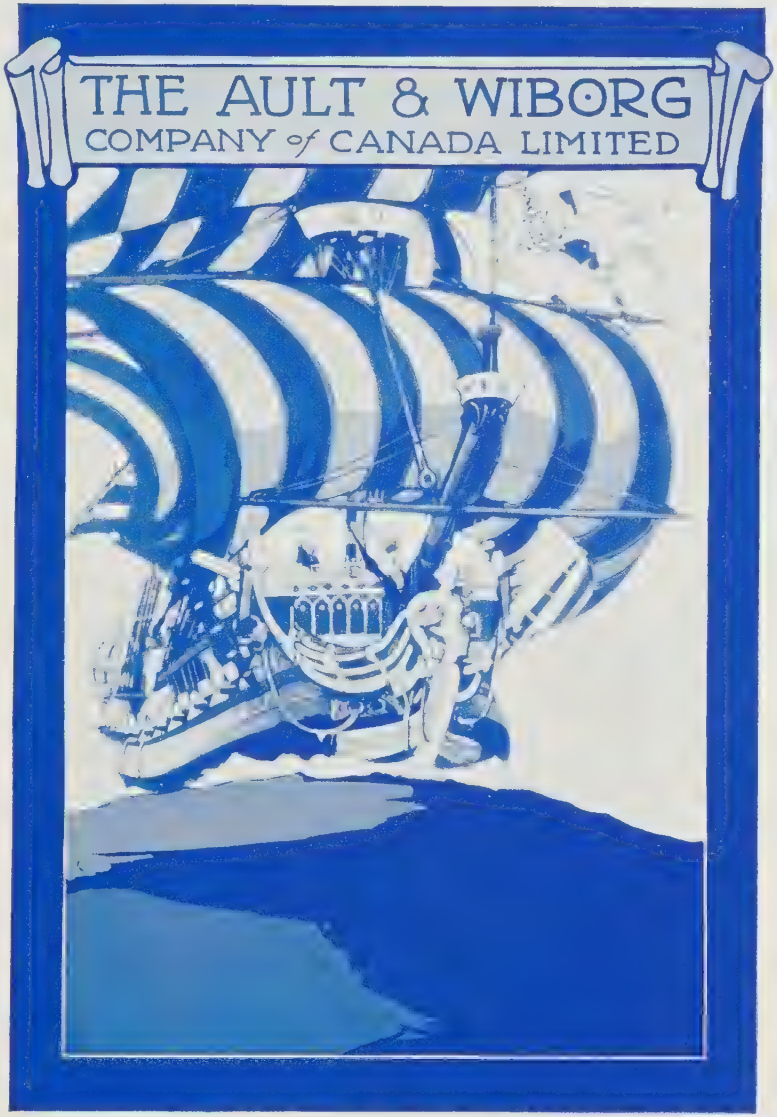

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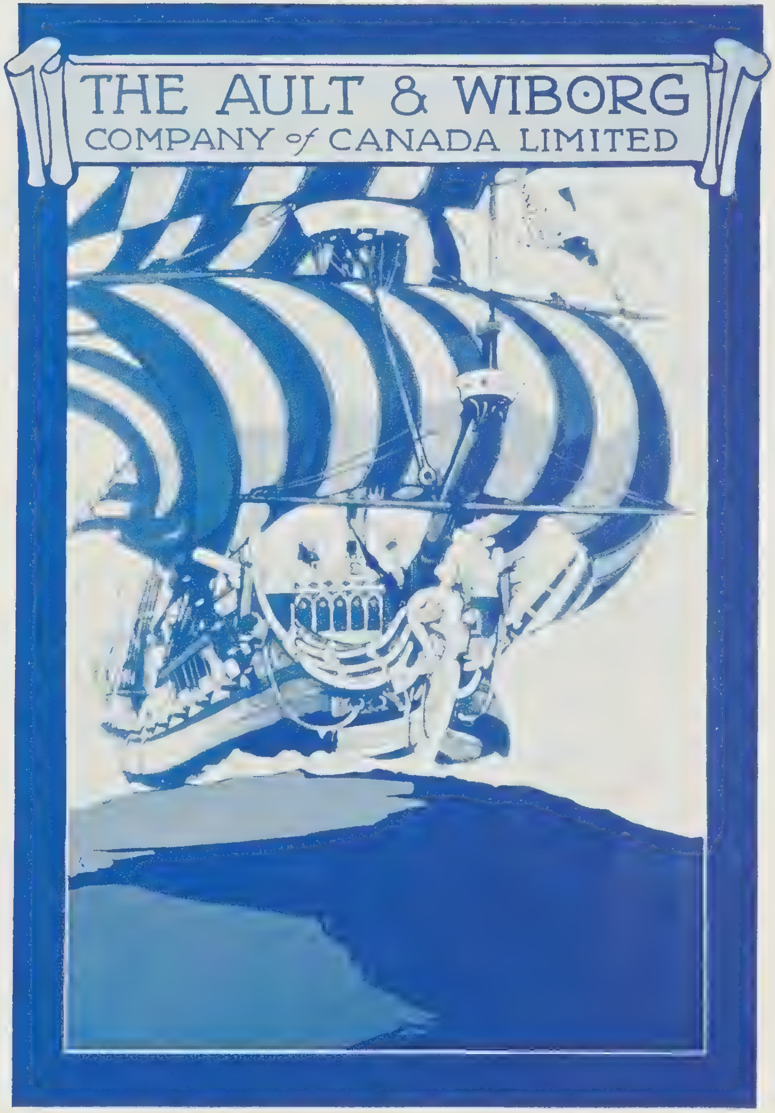
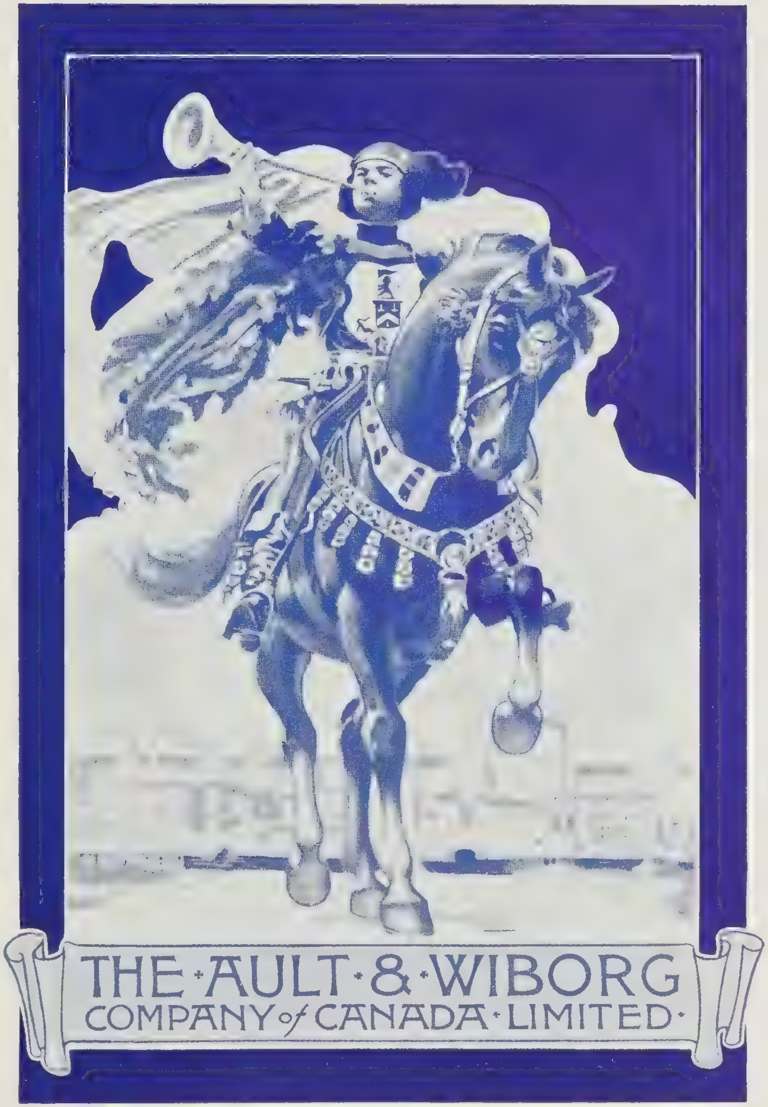


*Dark Blue 10640*



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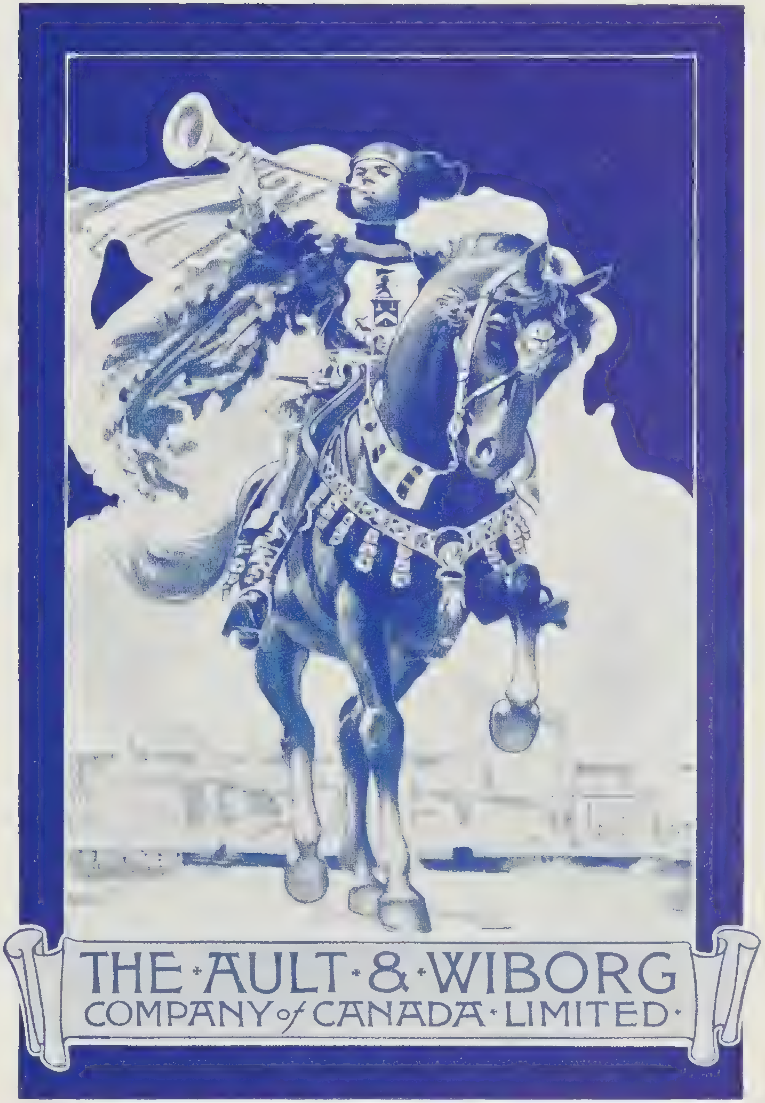
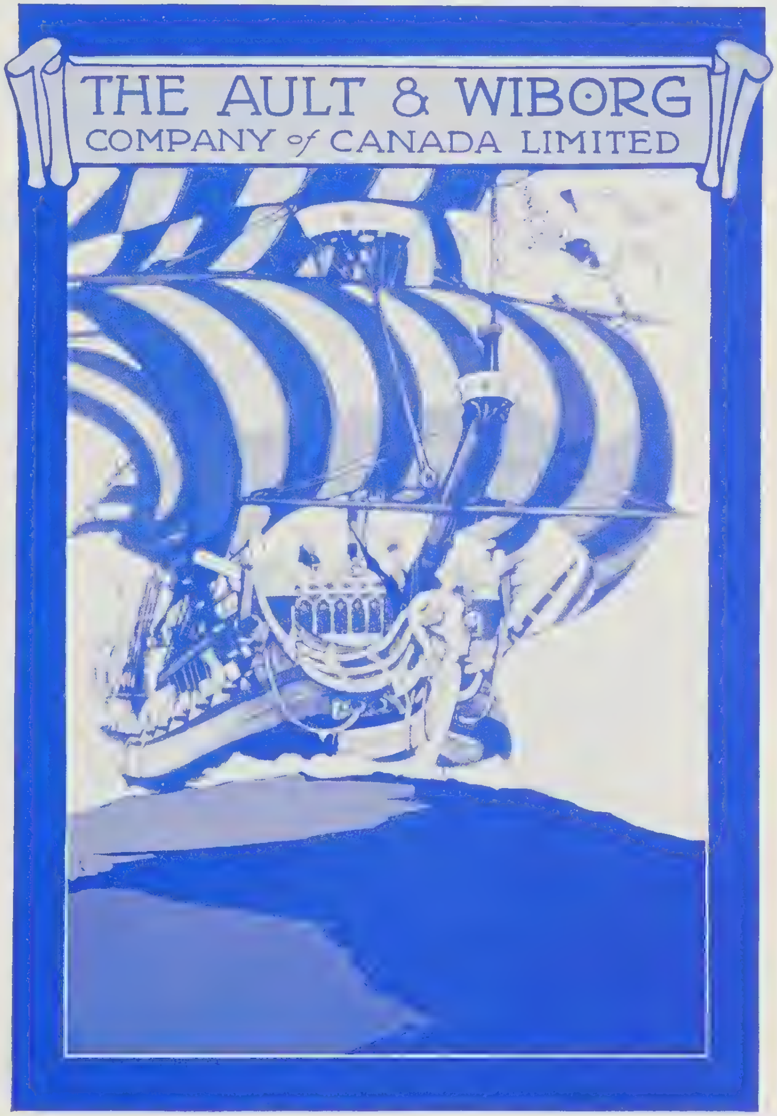
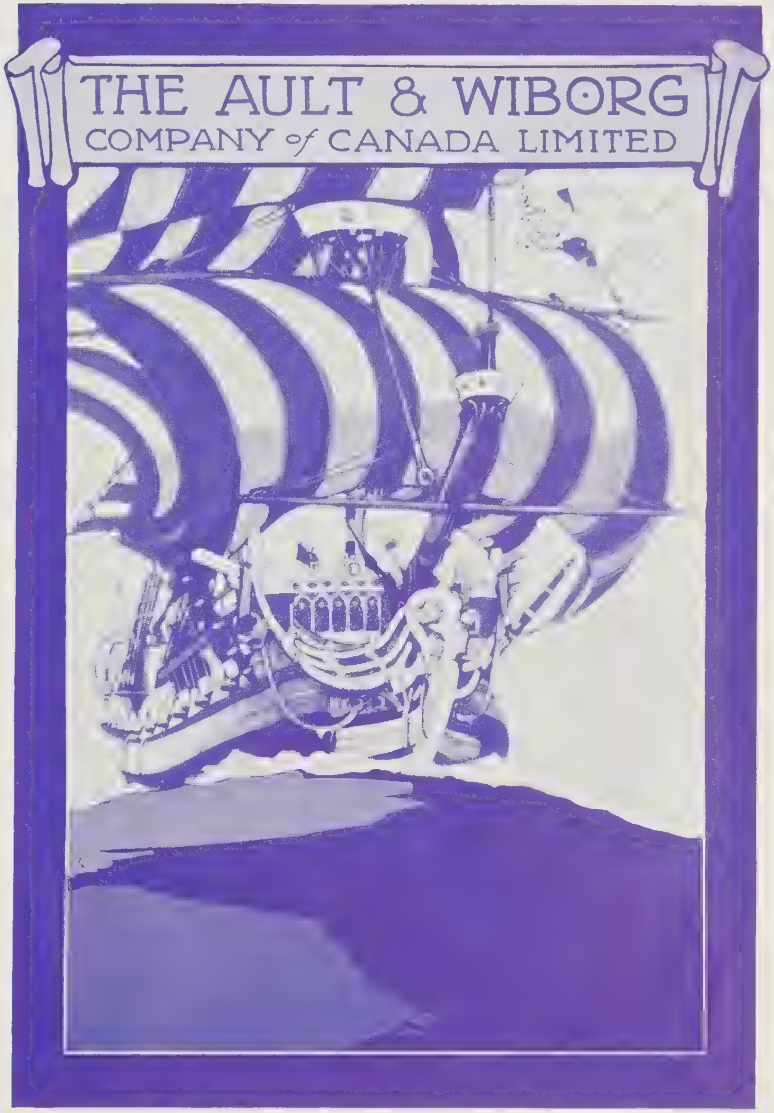


*Bronze Blue, Deep 9461*



*Reflex Blue, Light 9677*



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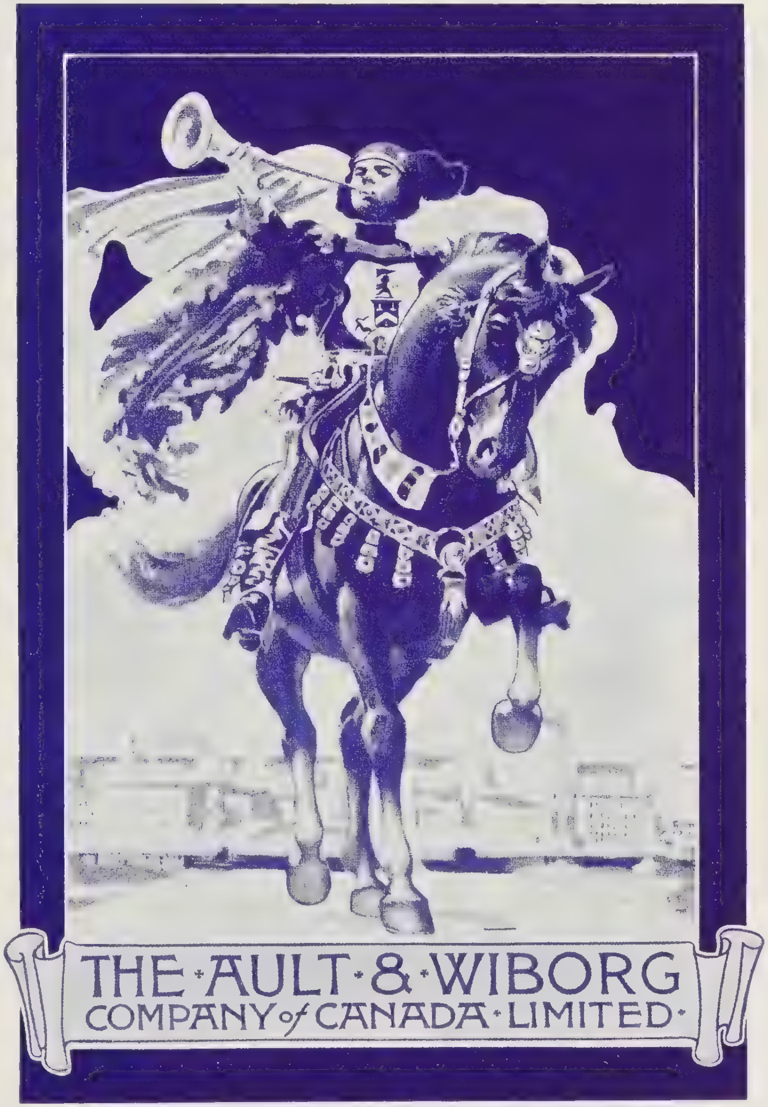

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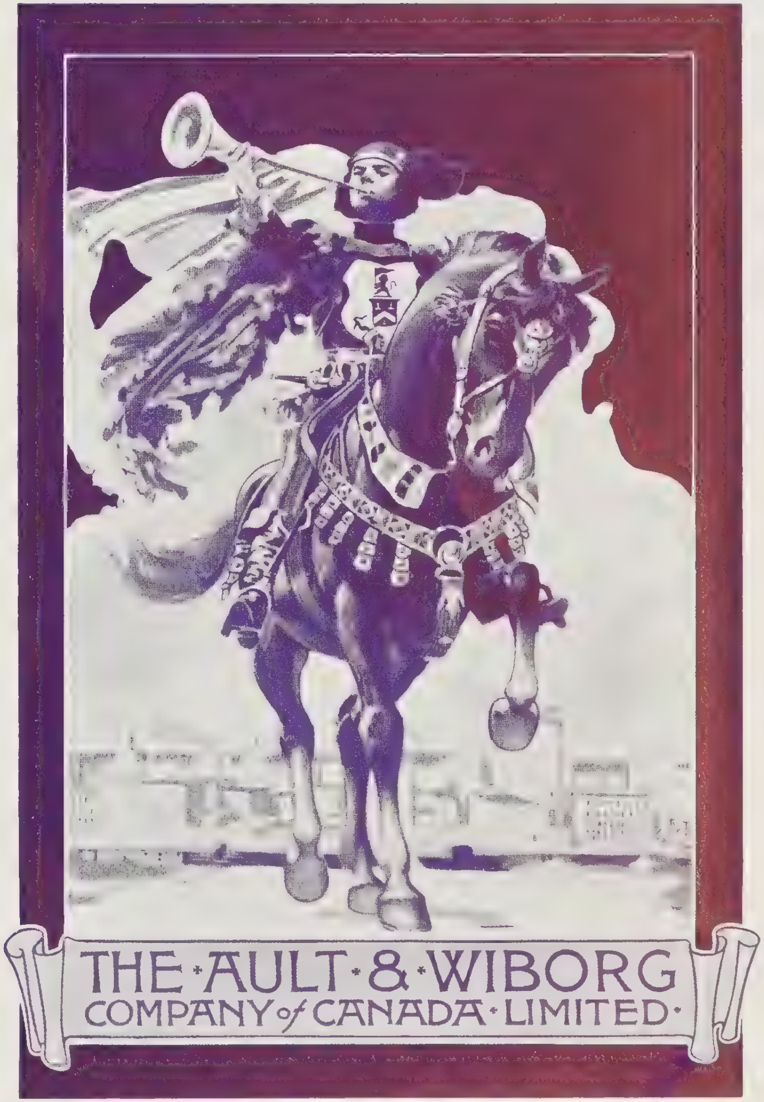
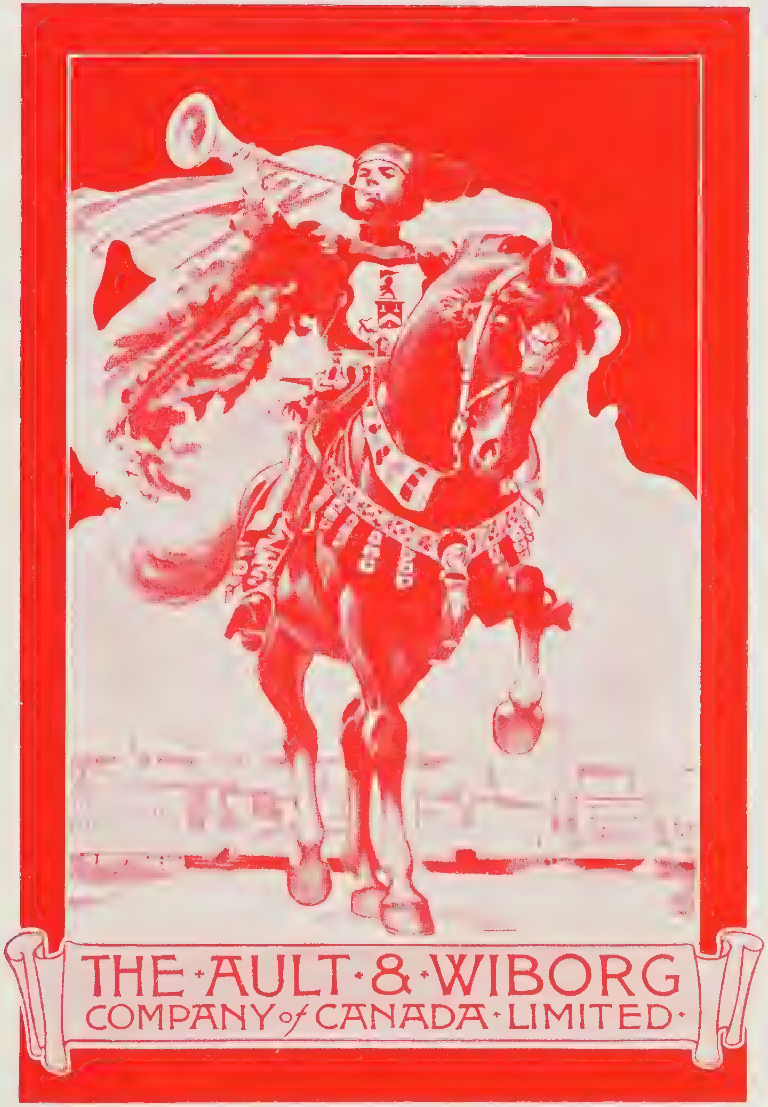


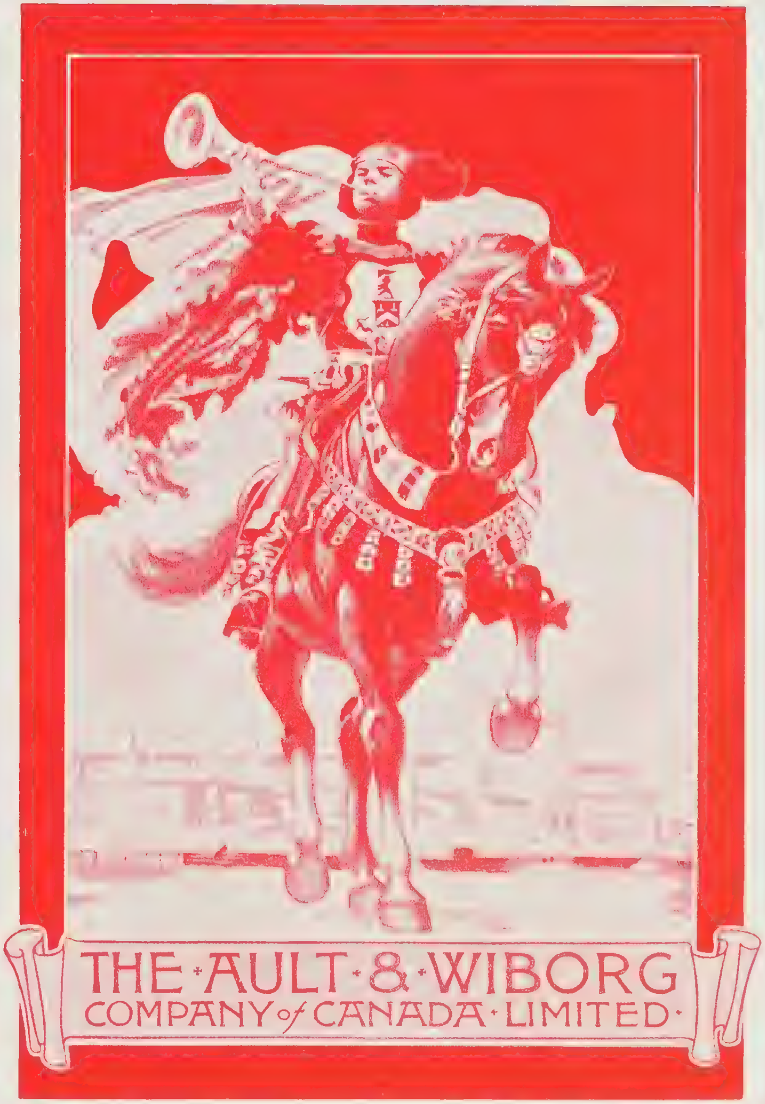
*Reflex Blue R. S. 12961*

*Liberty Red, Light 10850*

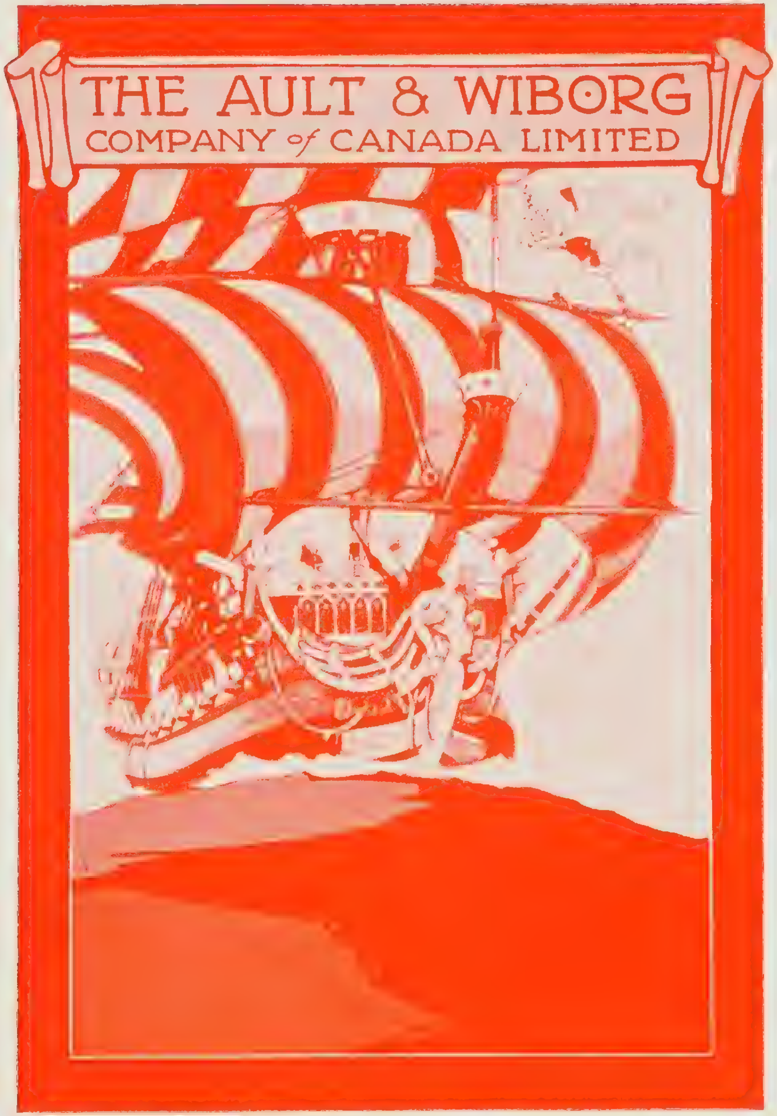
*Brilliant Red, 13208*



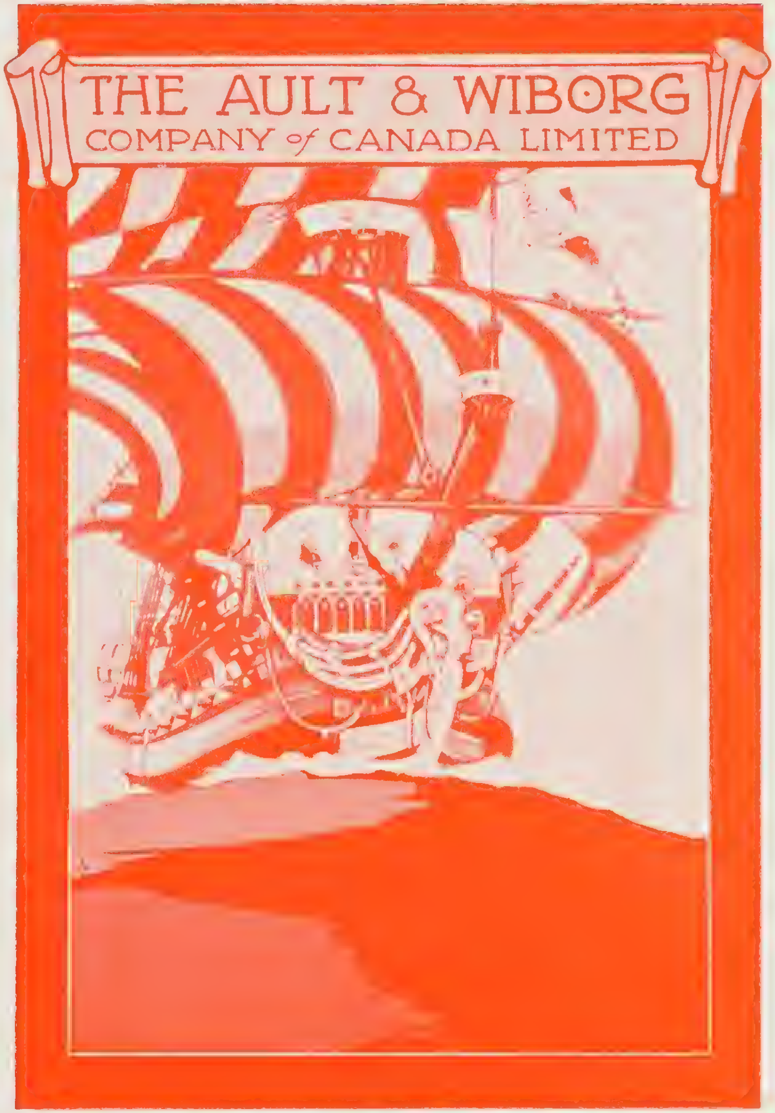
*Liberty Red, Medium 10692*



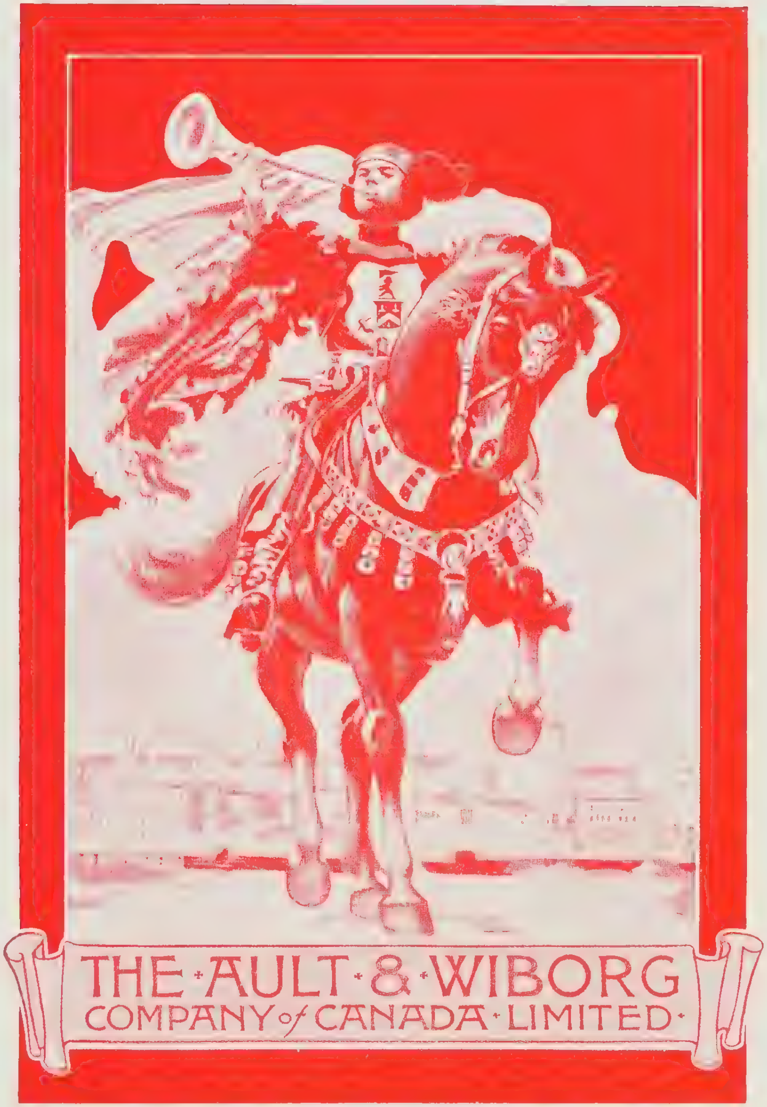
*Liberty Red, Deep 11185*



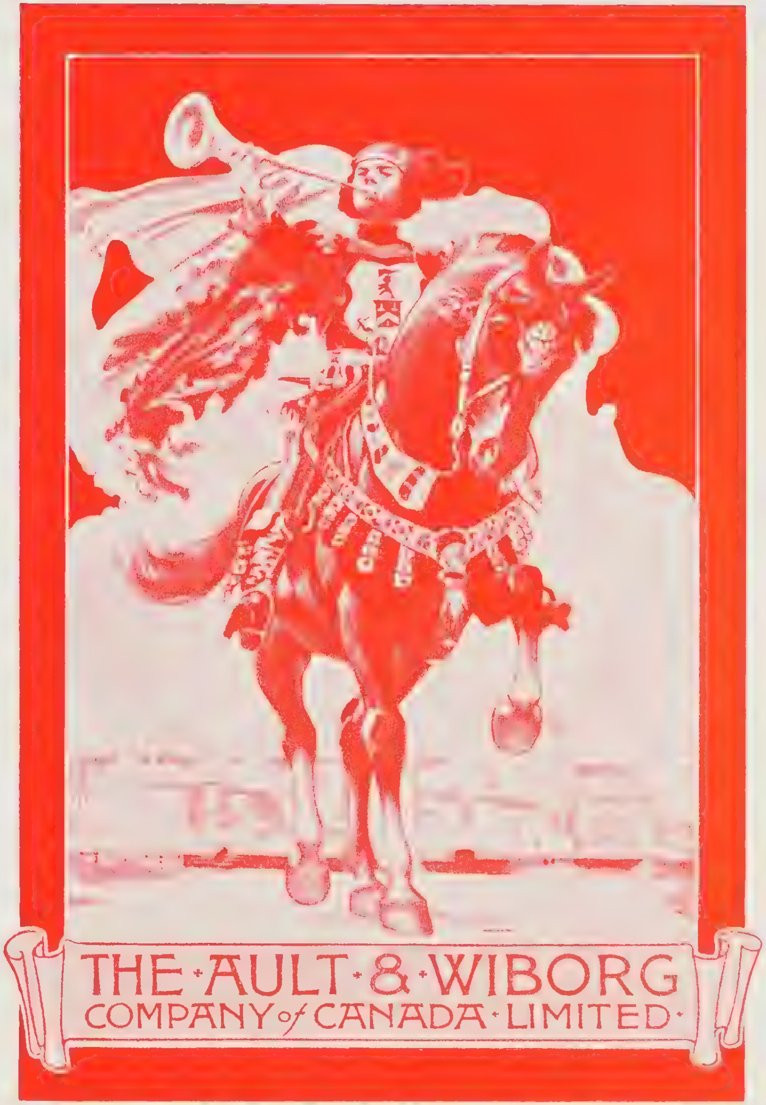
*Boston Red 10425*



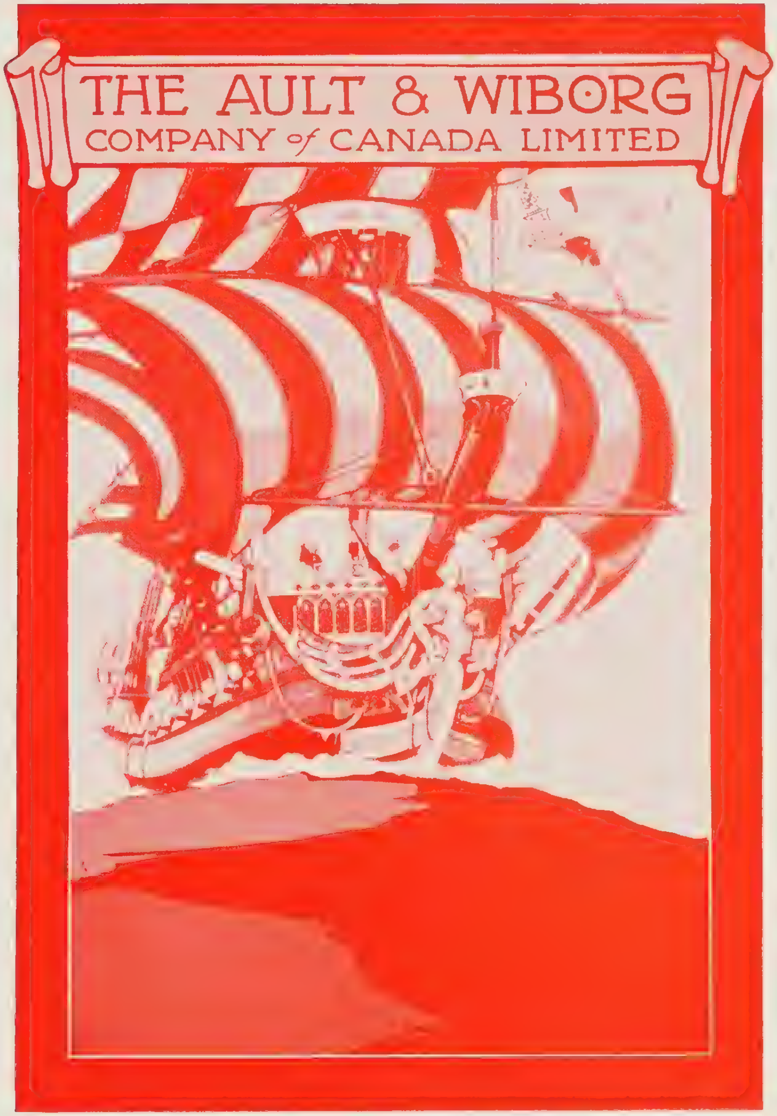
*E. & R. Red, 9136*



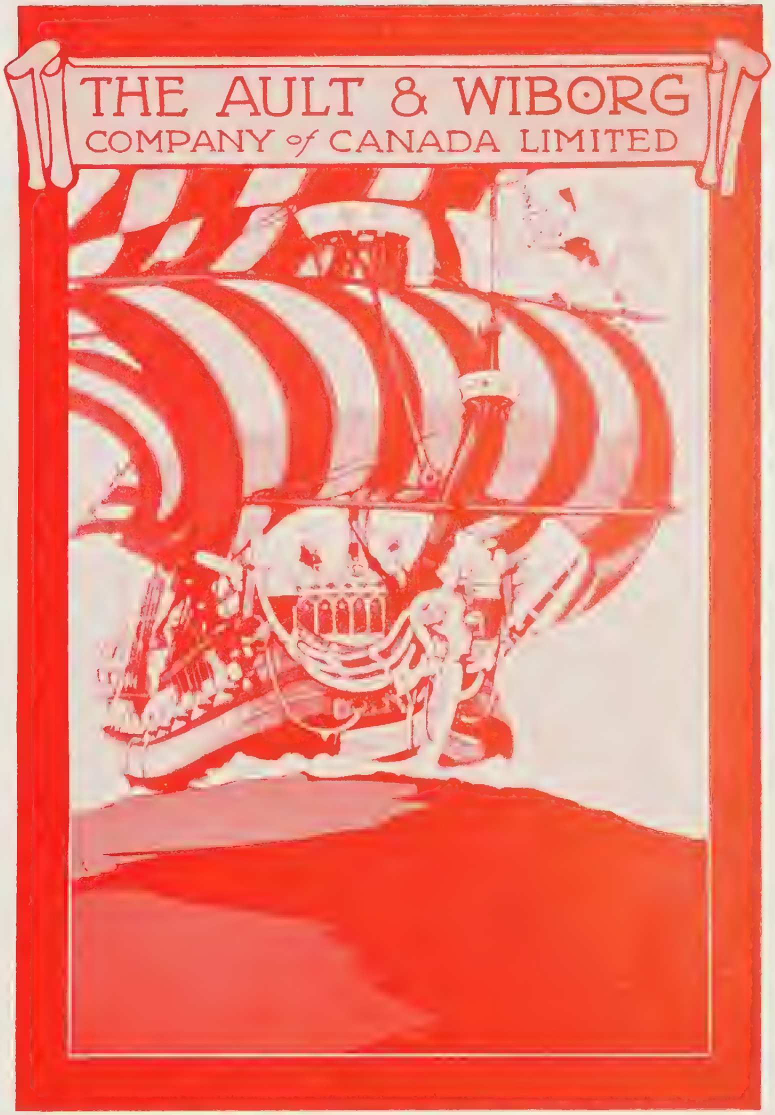
*Job Red, 9650*



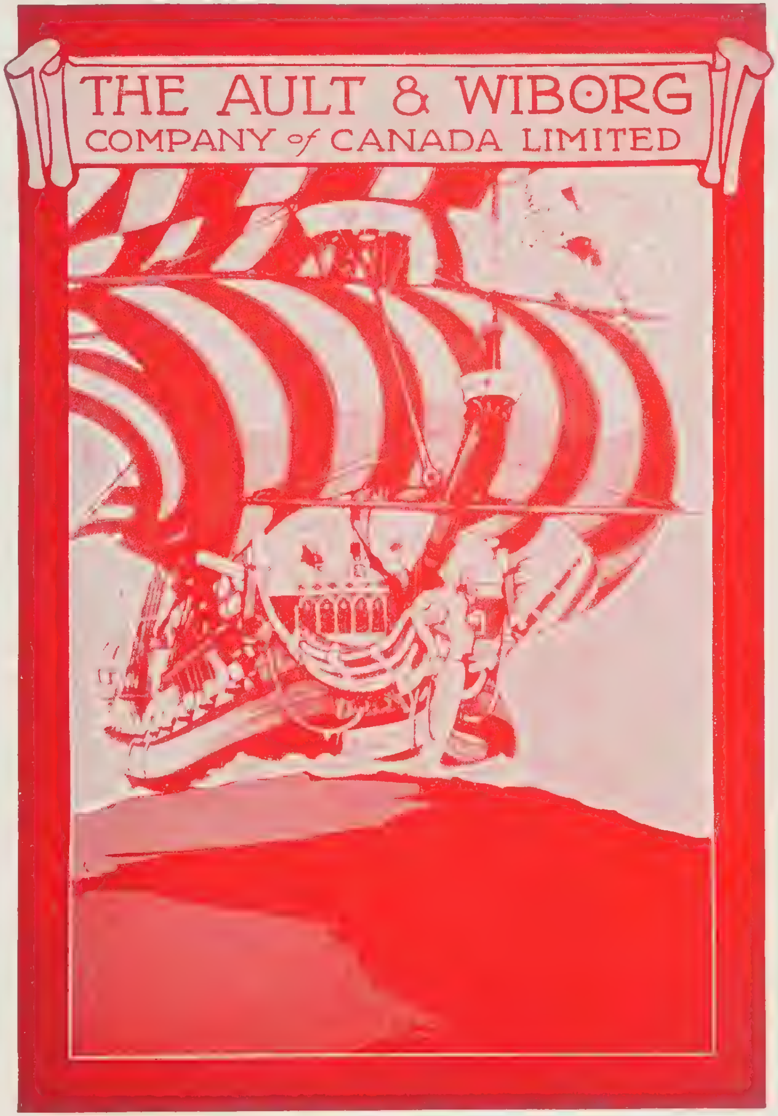
*Fine Bright Red, 11165*



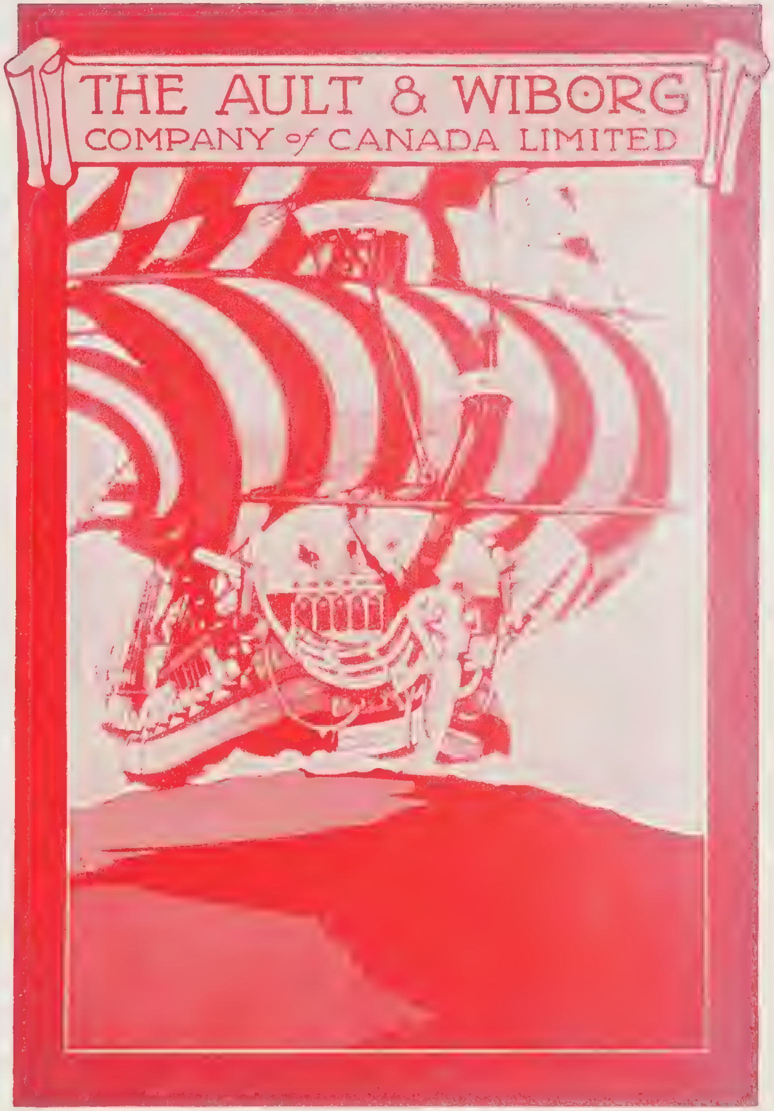
*Golden Red, Light 10928*



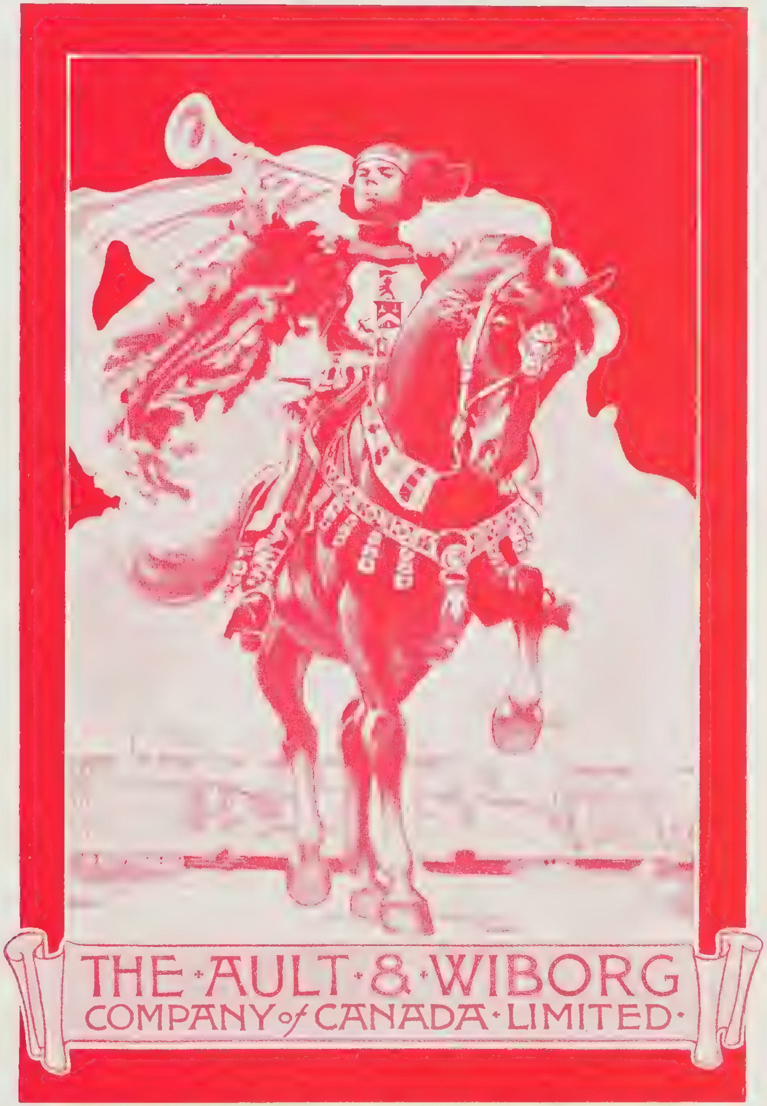
*Golden Red, Deep 13194*



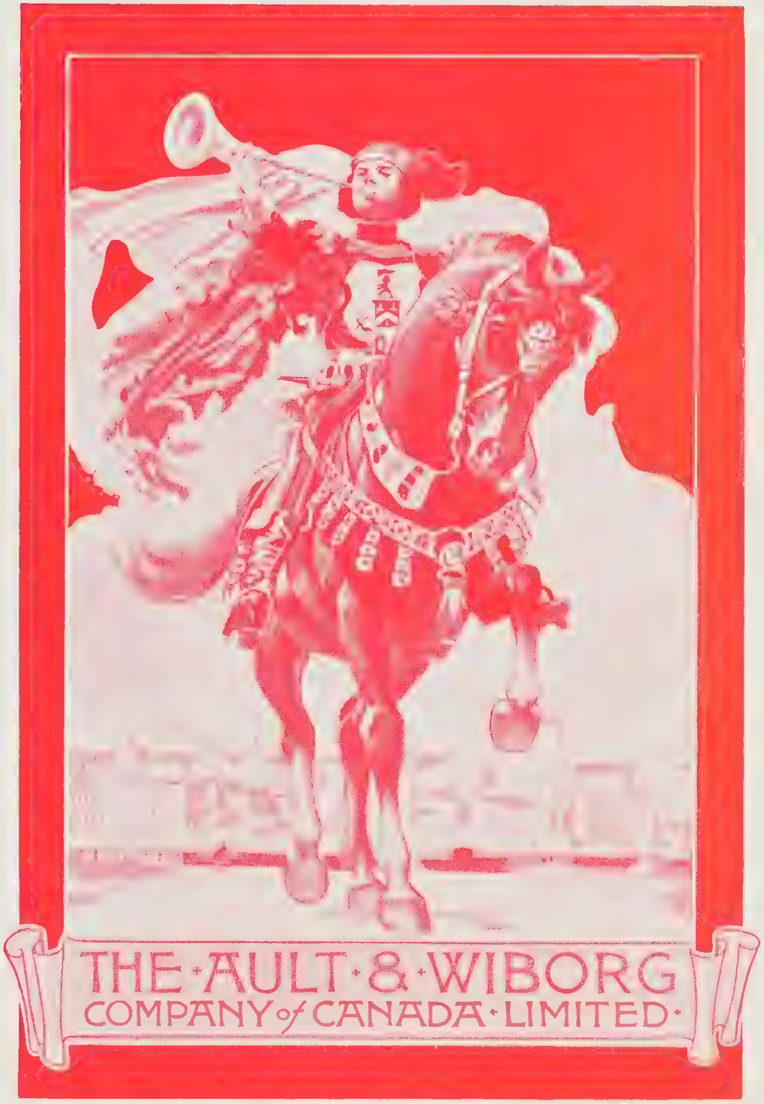
*Aragon Red, 9455*



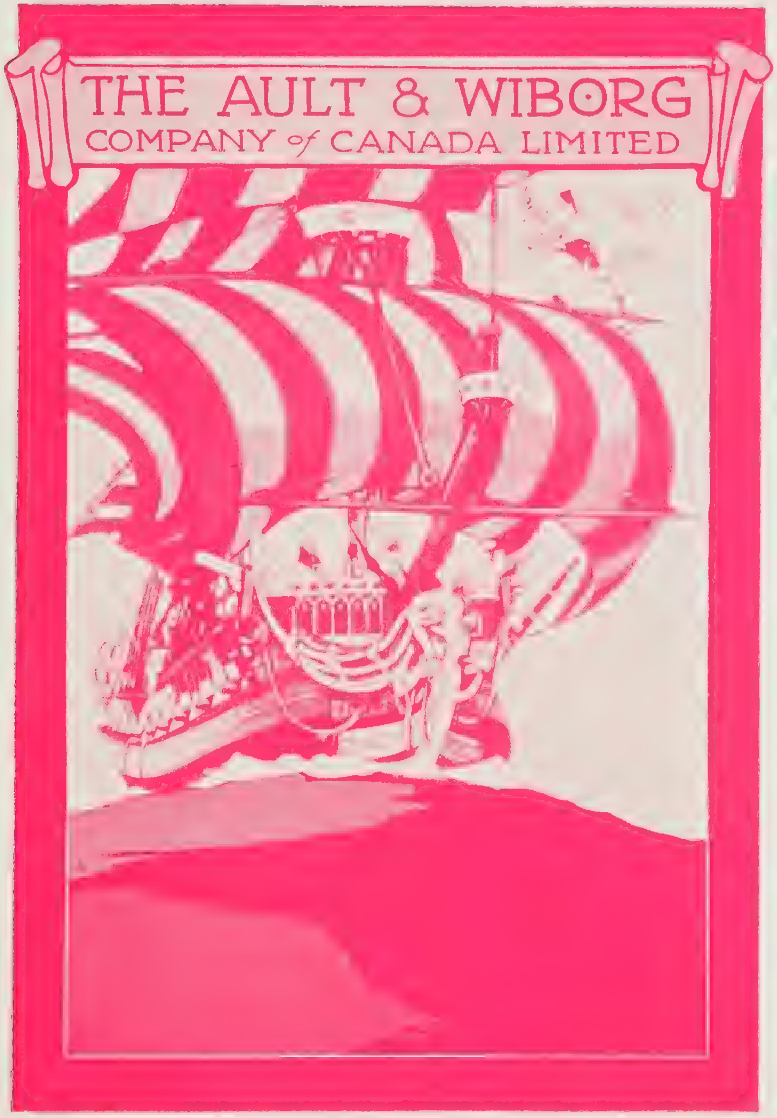
*Perfection Red, 9456*



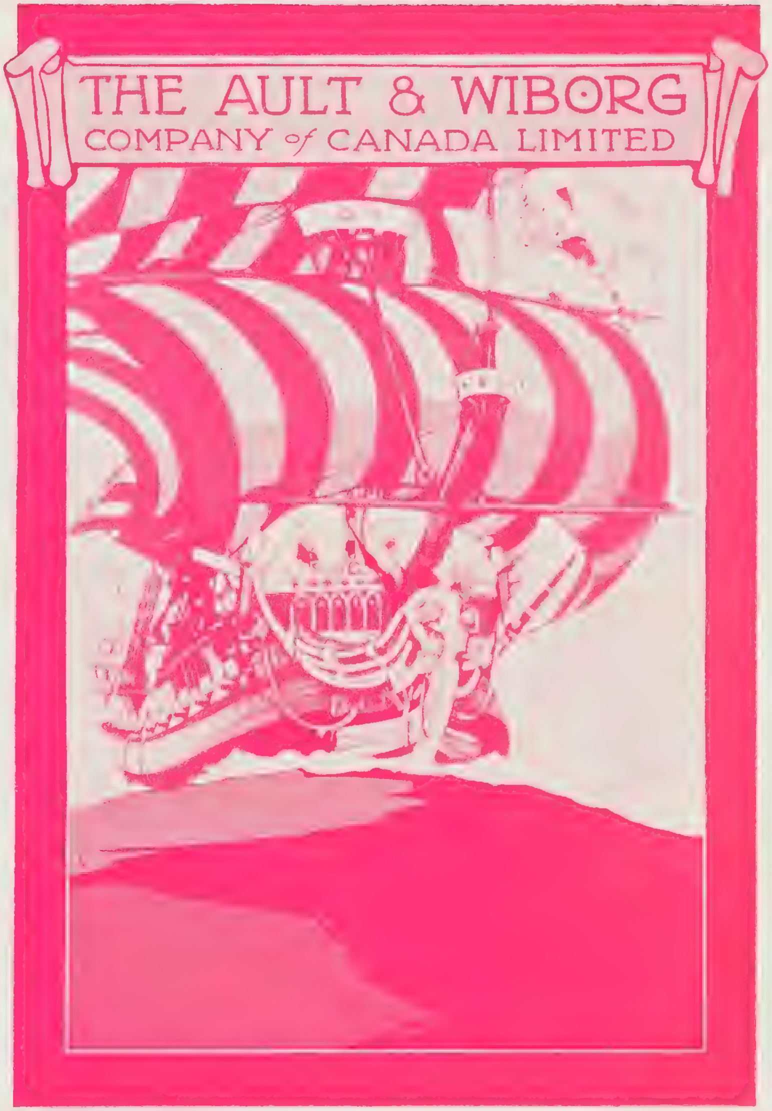
*Peony Red, 10306*



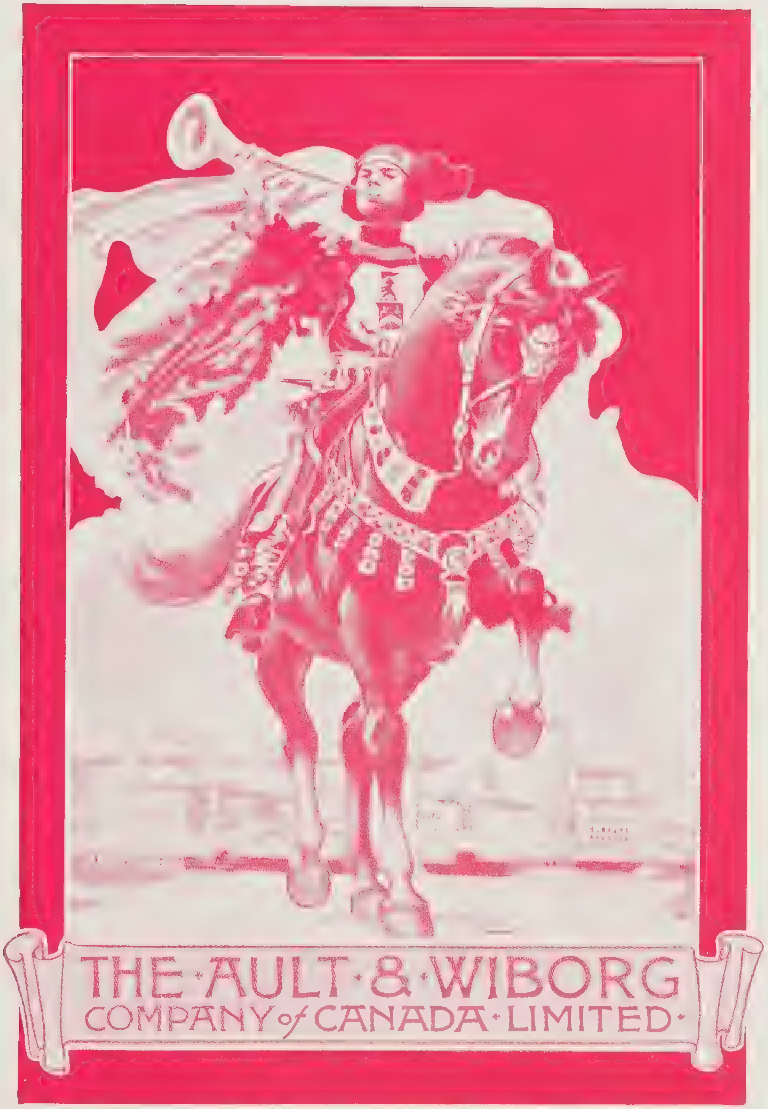
*Rose Lake, 11271*



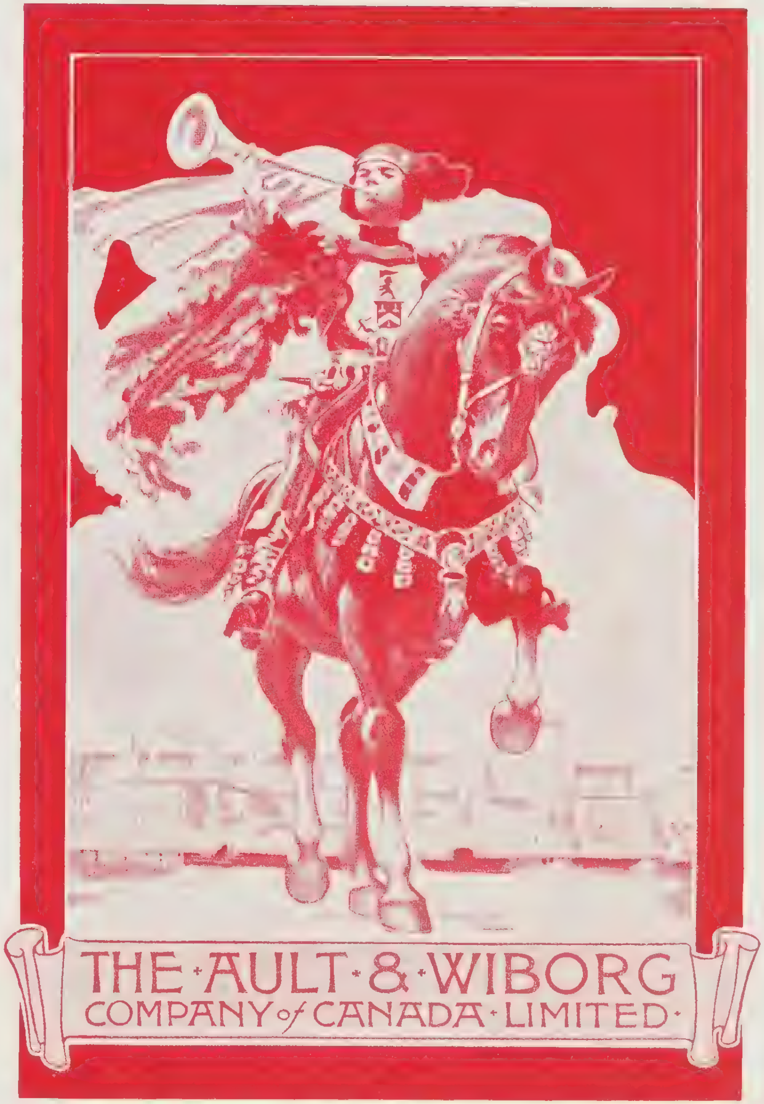
*Jacqueminot, 13032*



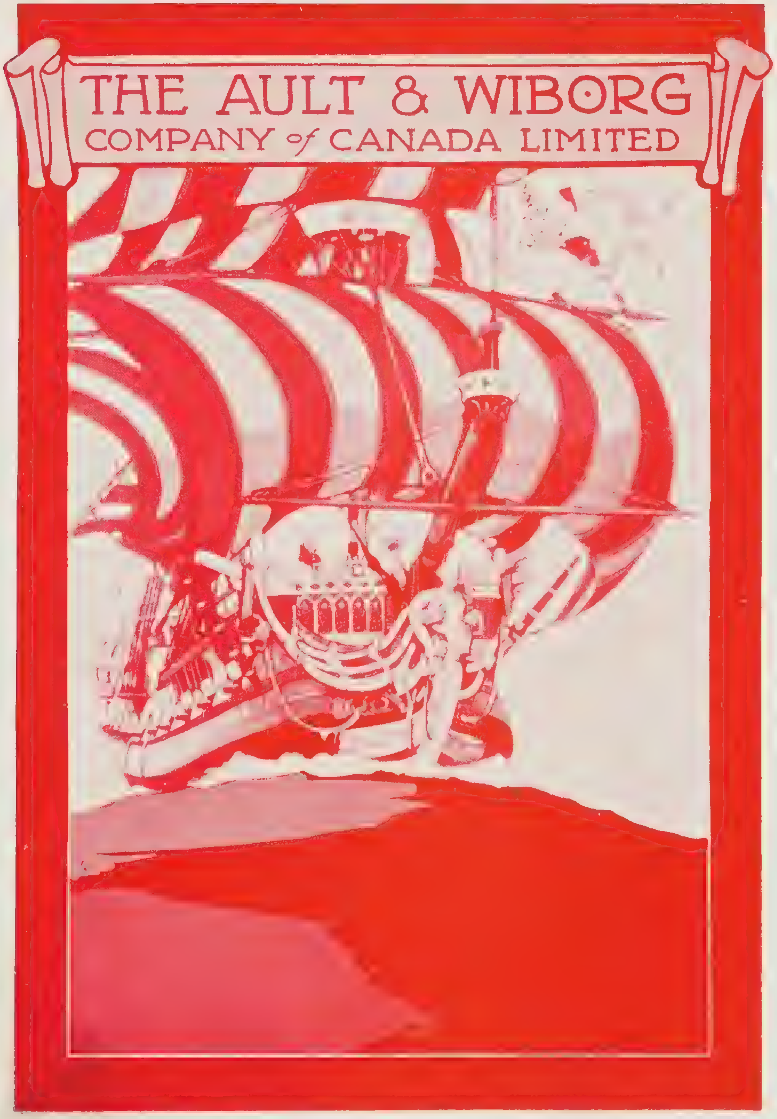
*Magenta, 13170*



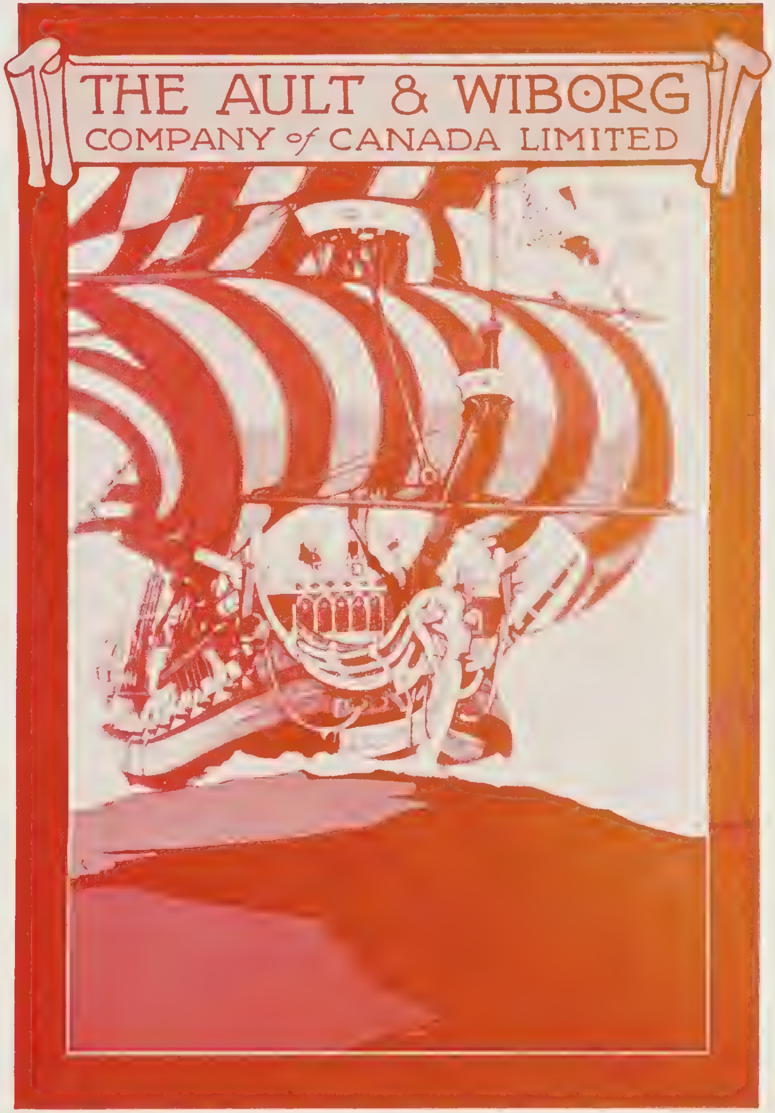
*Delhi Red, 13270*



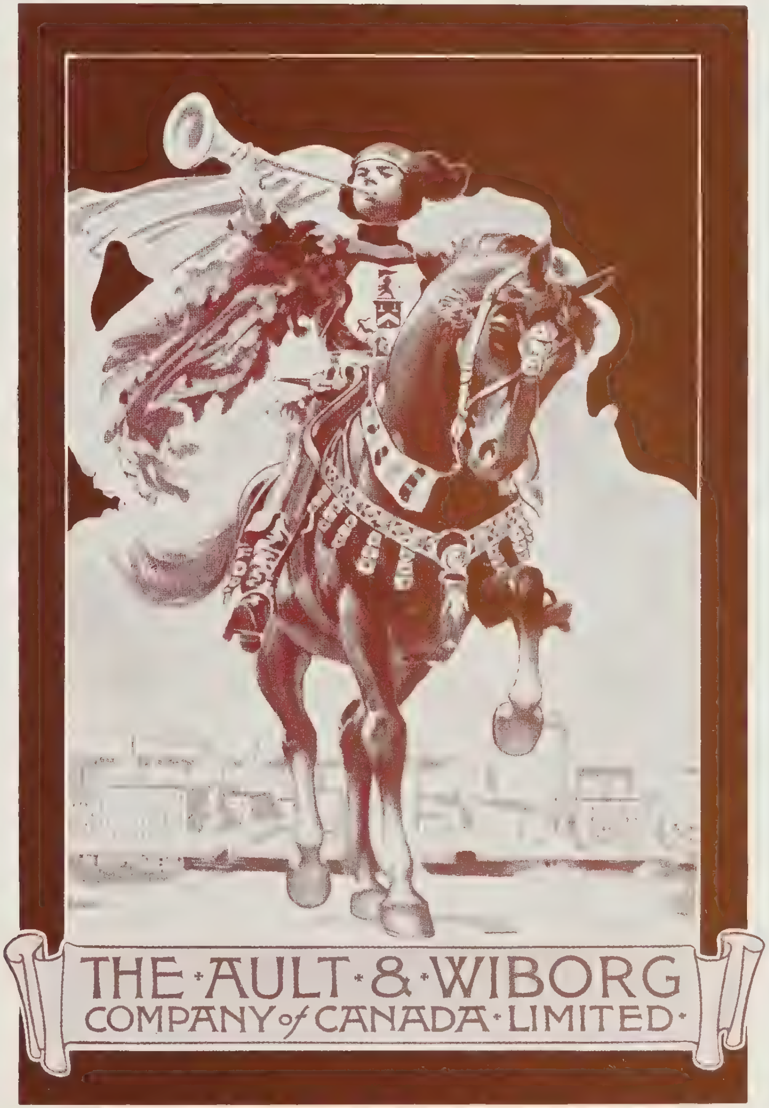
*Burgundy Red, 9449*



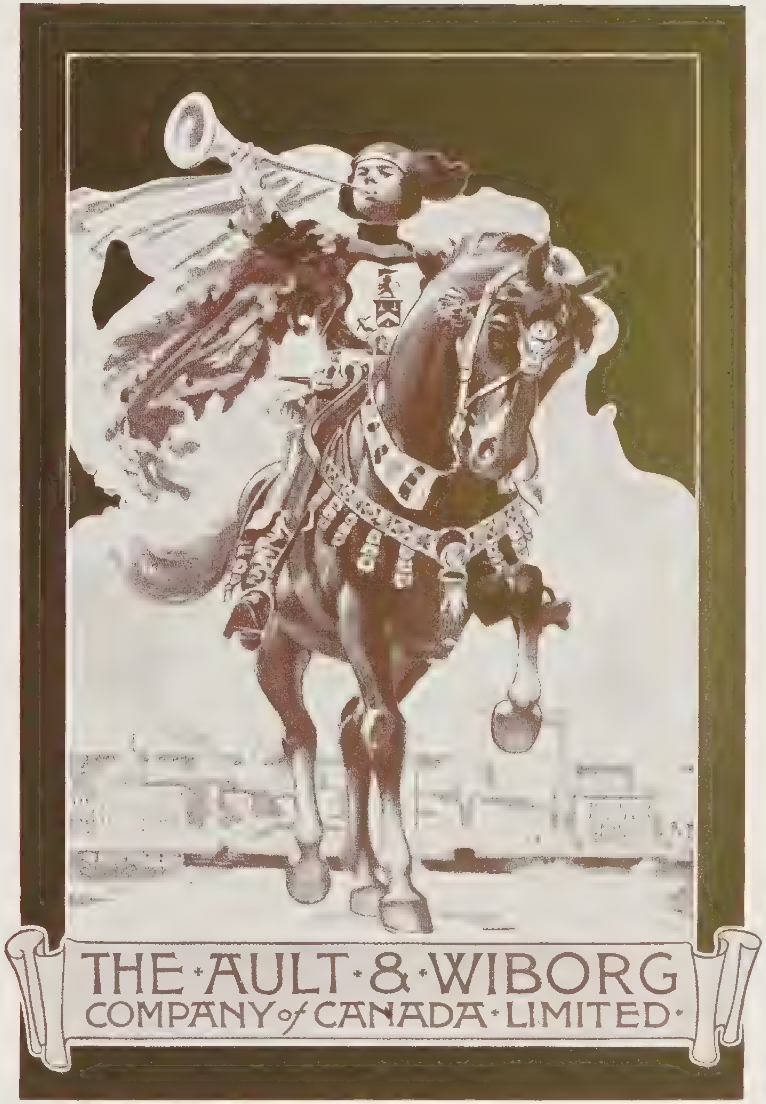
Claret Bronze, 13159



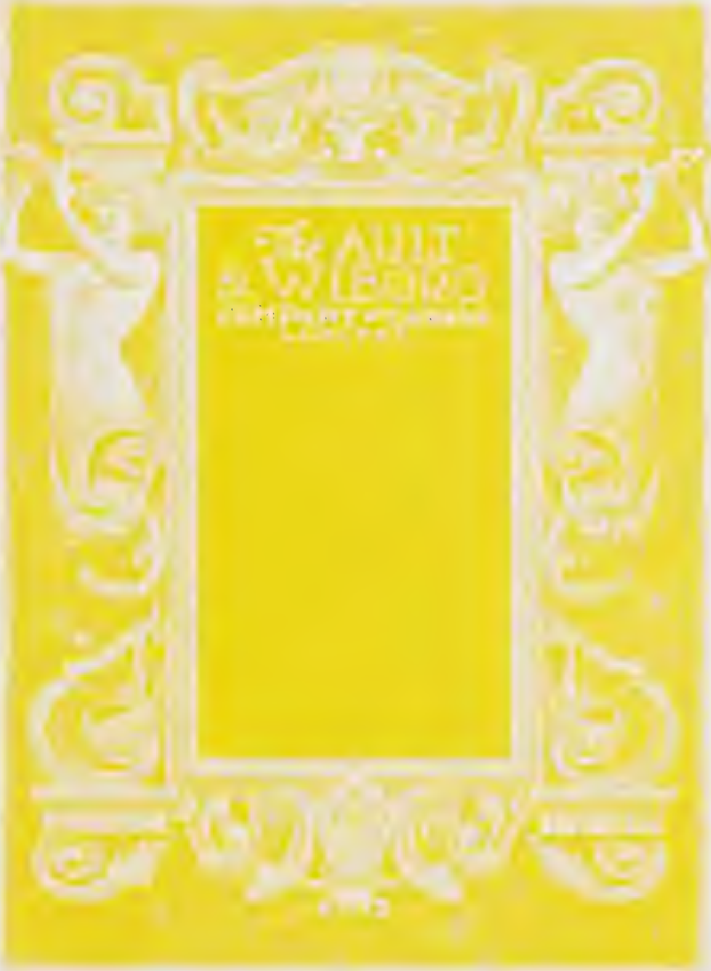
Bronze Brown, Light 13165



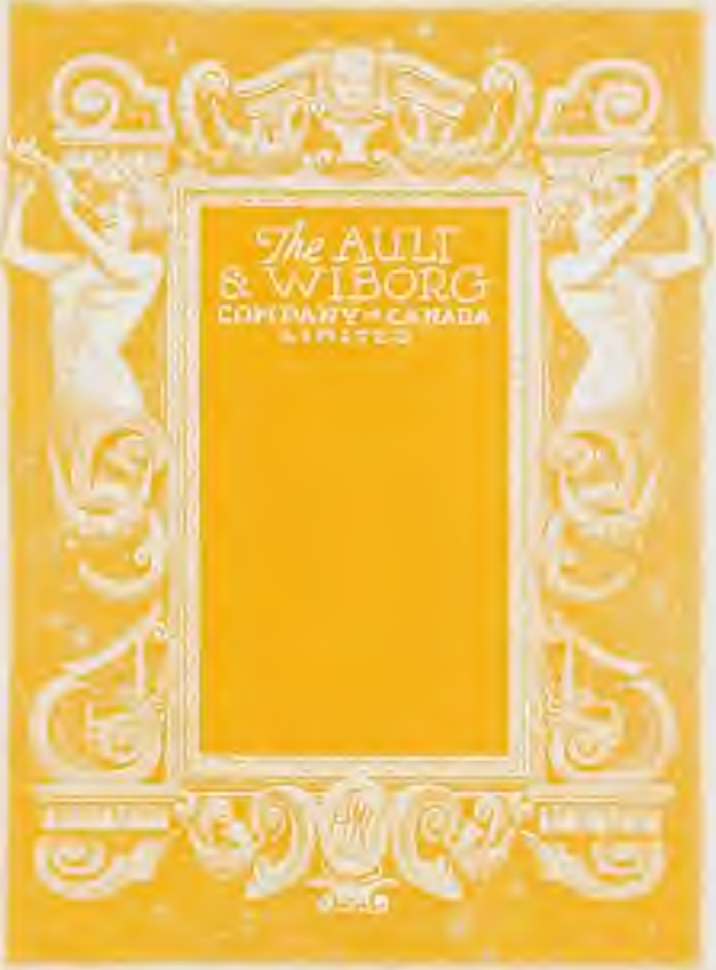
*Bronze Brown, Deep 13348*



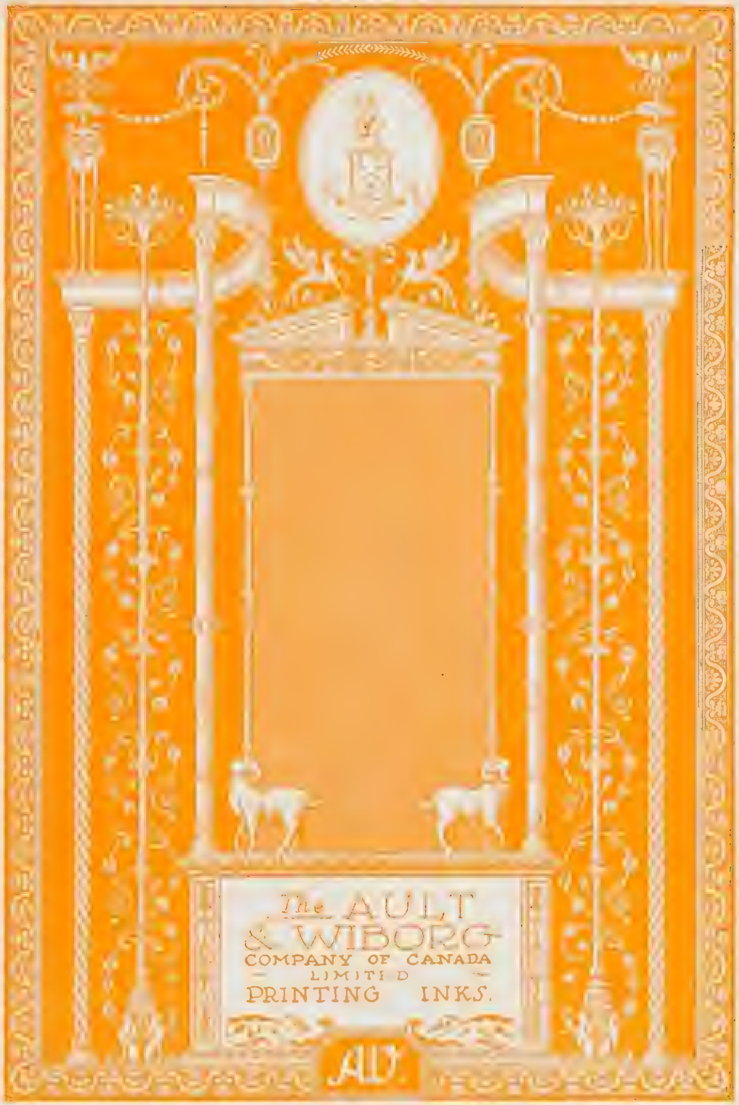
*Panzy Bronze, 13337*



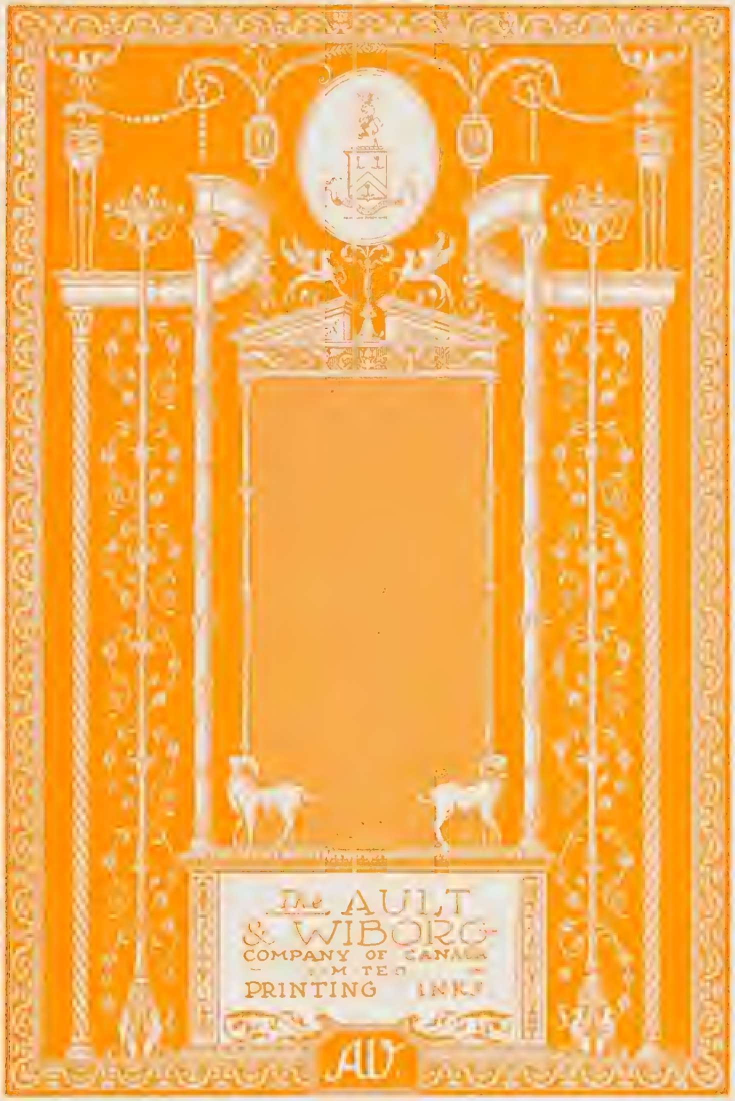
Golden Yellow, 10197



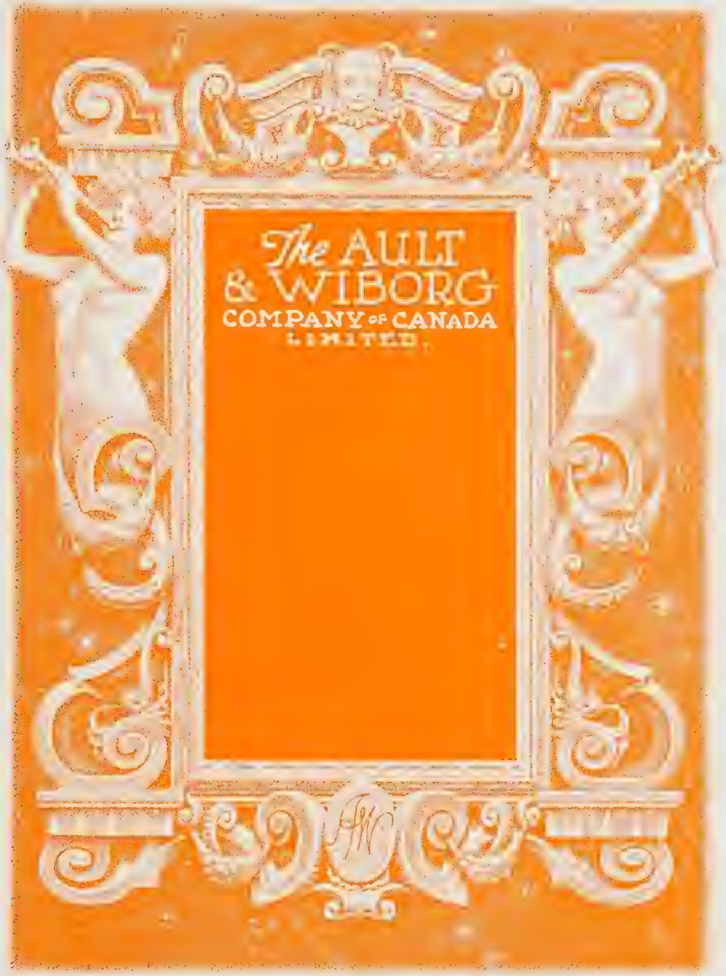
Orange Yellow, [illegible]



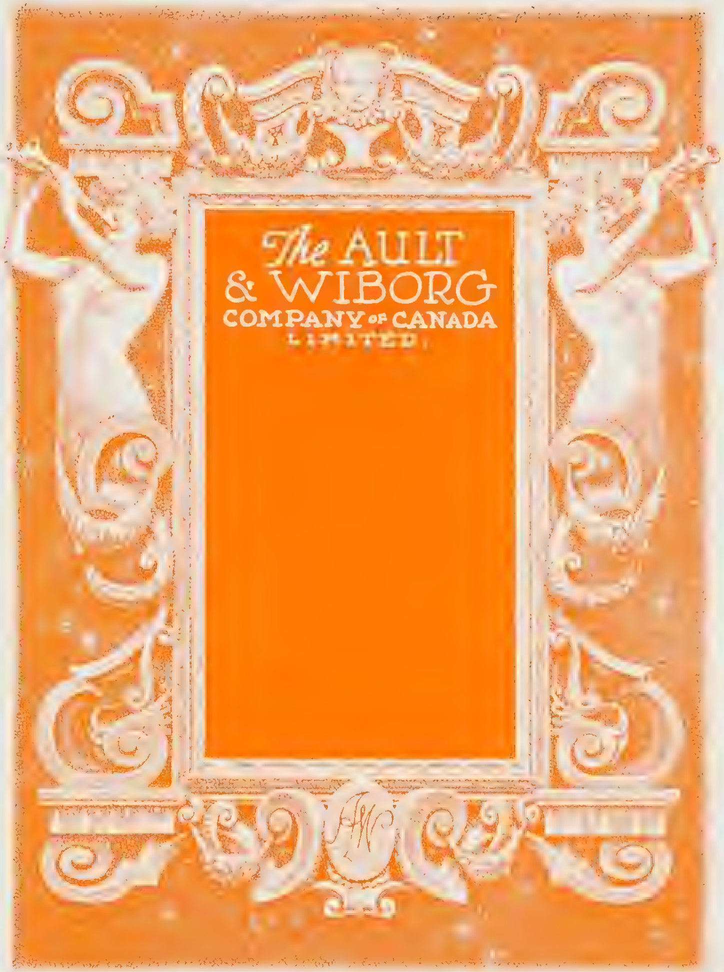
*Fast Orange, 10678*



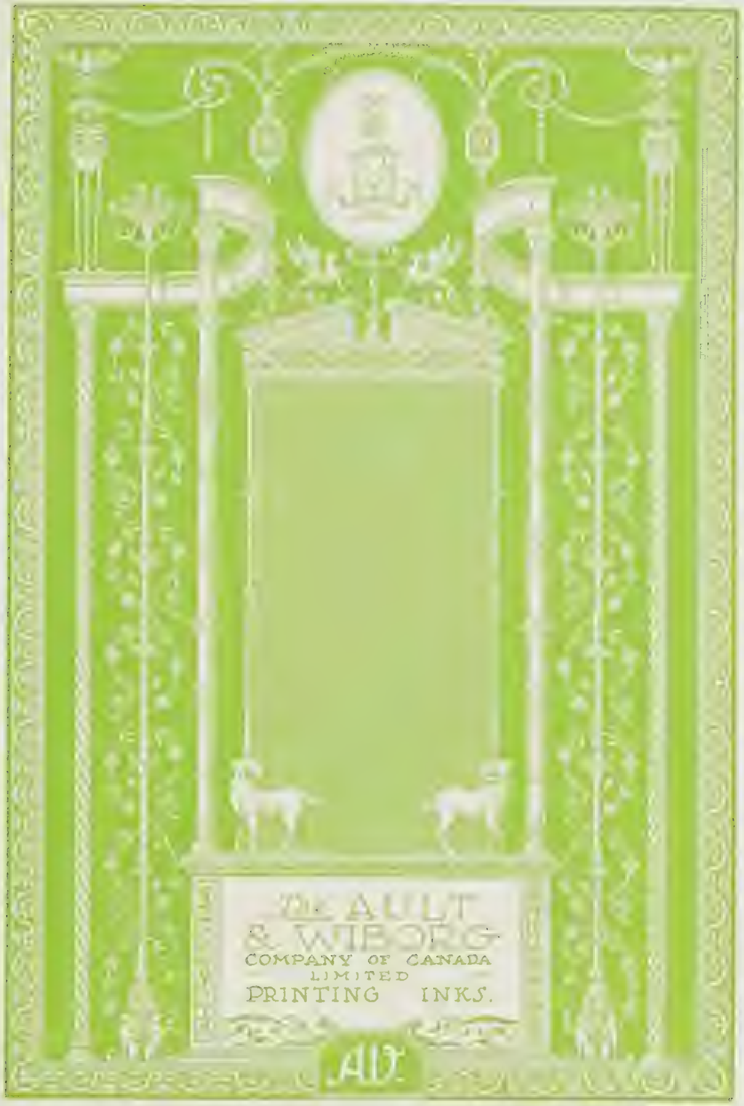
*Orange Lacquer, 13429*



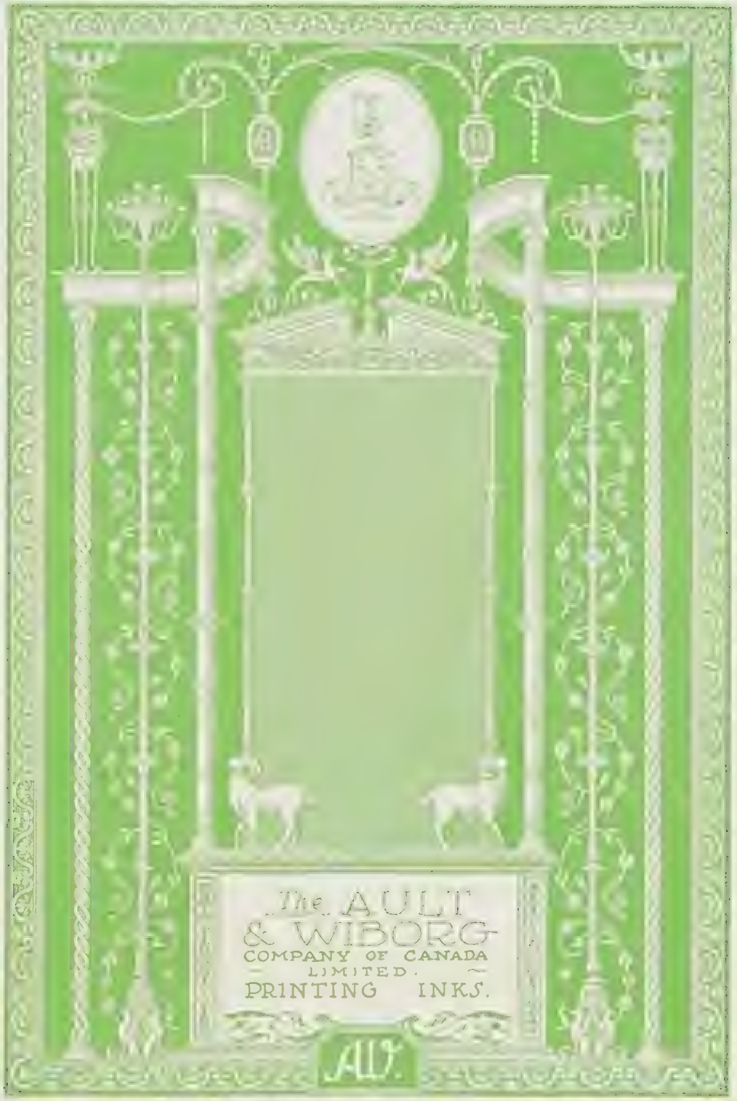
Persian Orange, 11025



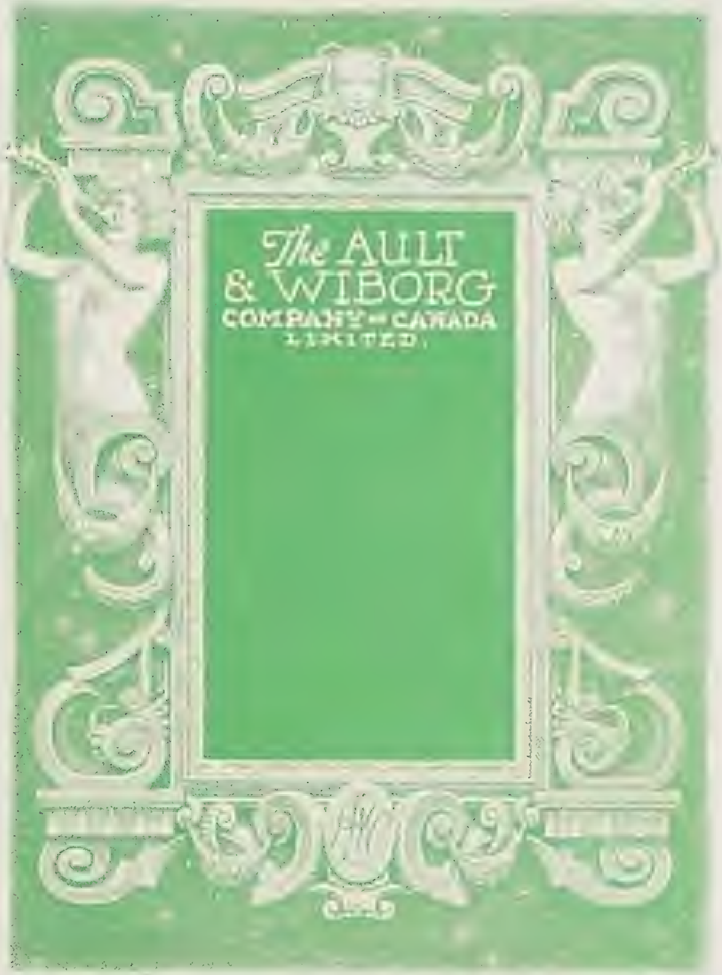
Arden Orange, 13385



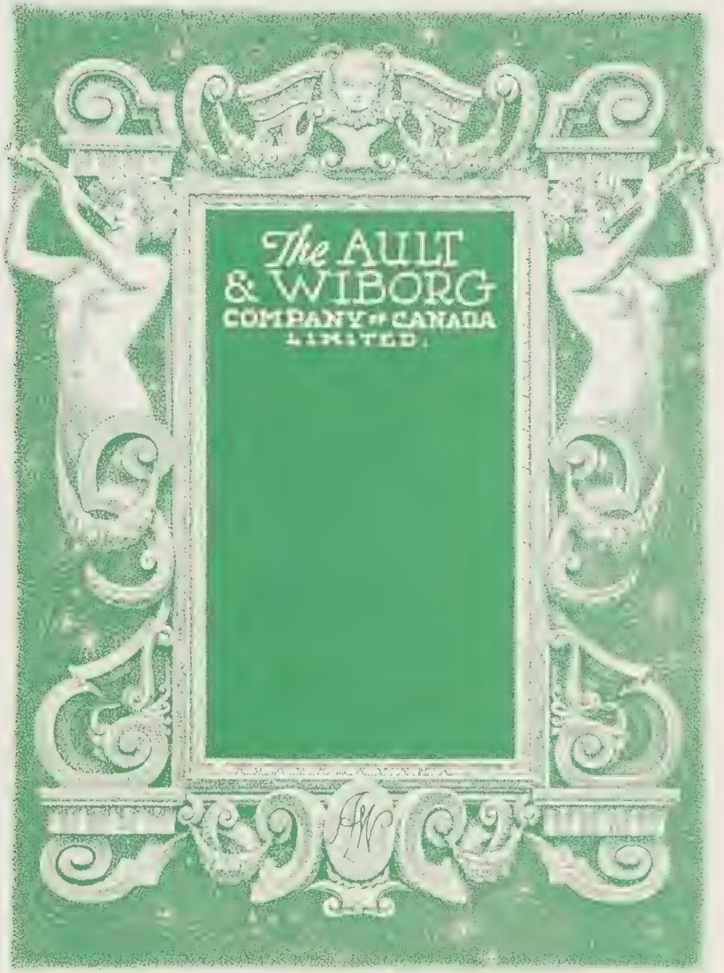
Light Green, 11170



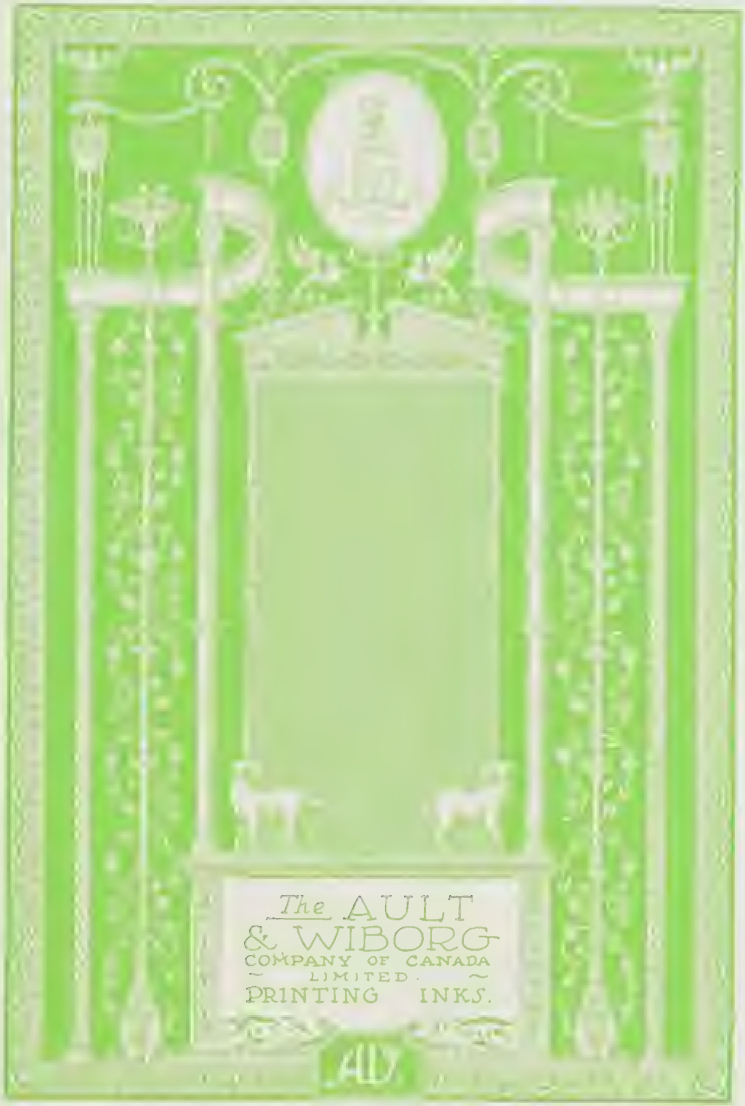
Light Green, 10249



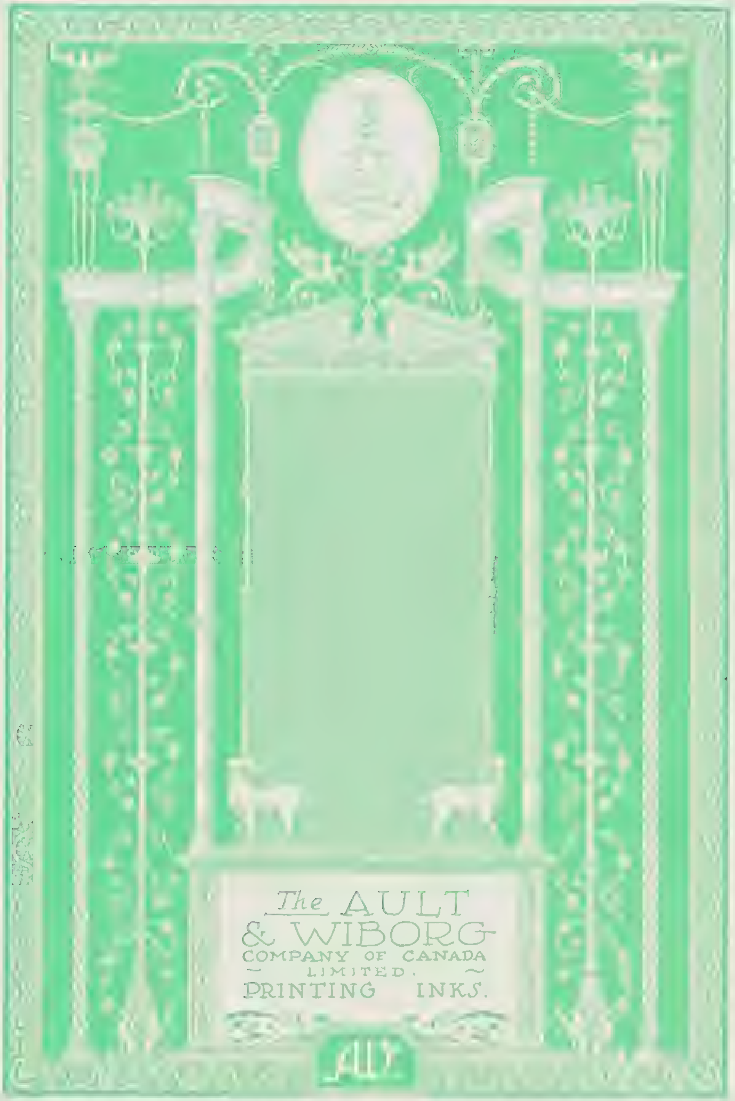
*Medium Green, 10318*



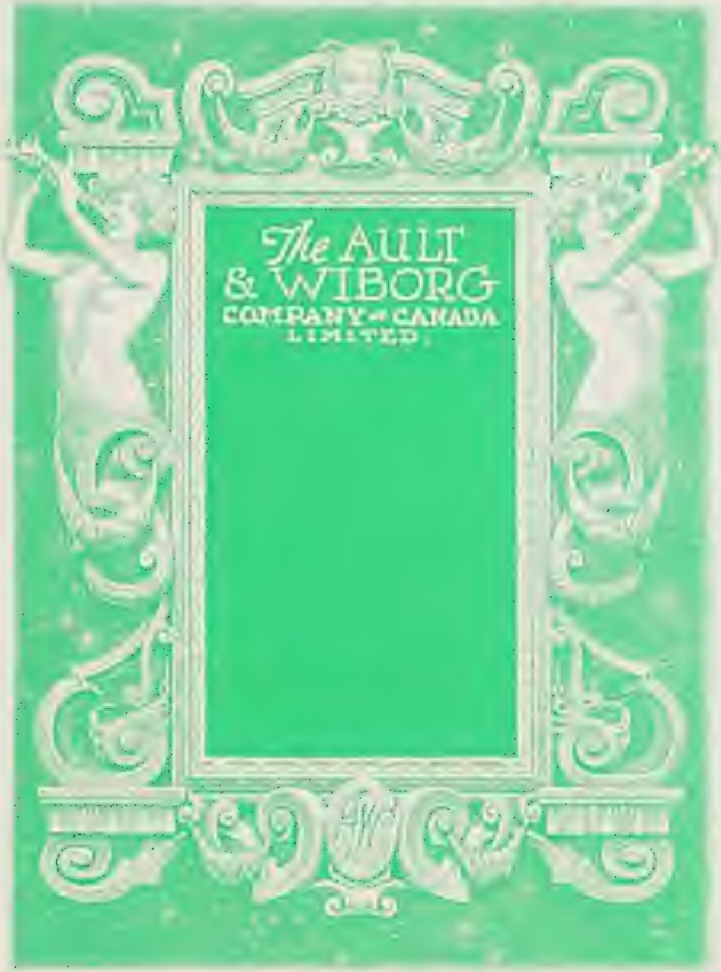
*Dark Green, 9108*



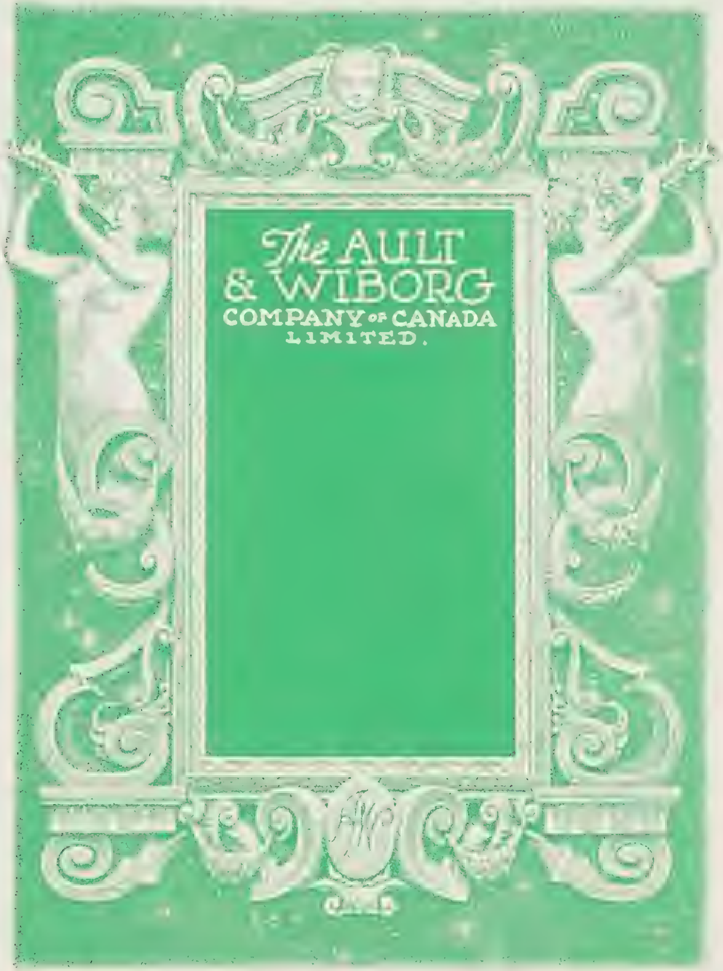
*Velvet Green, Light 10769*



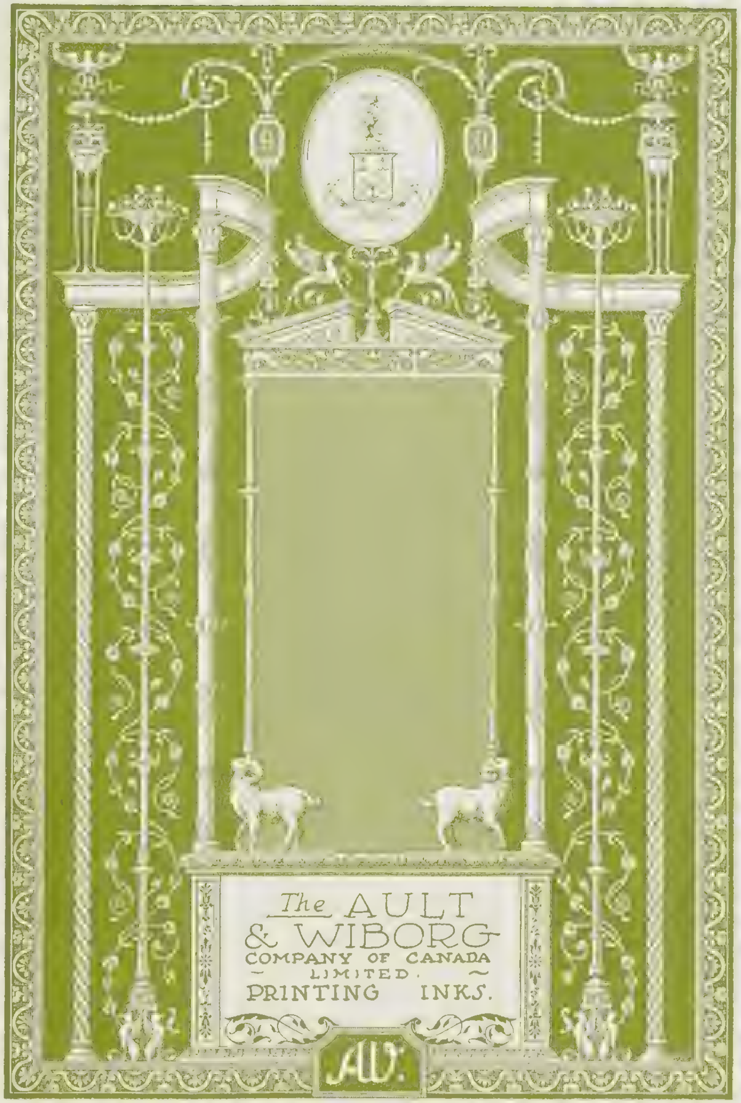
*Velvet Green, Deep 10621*



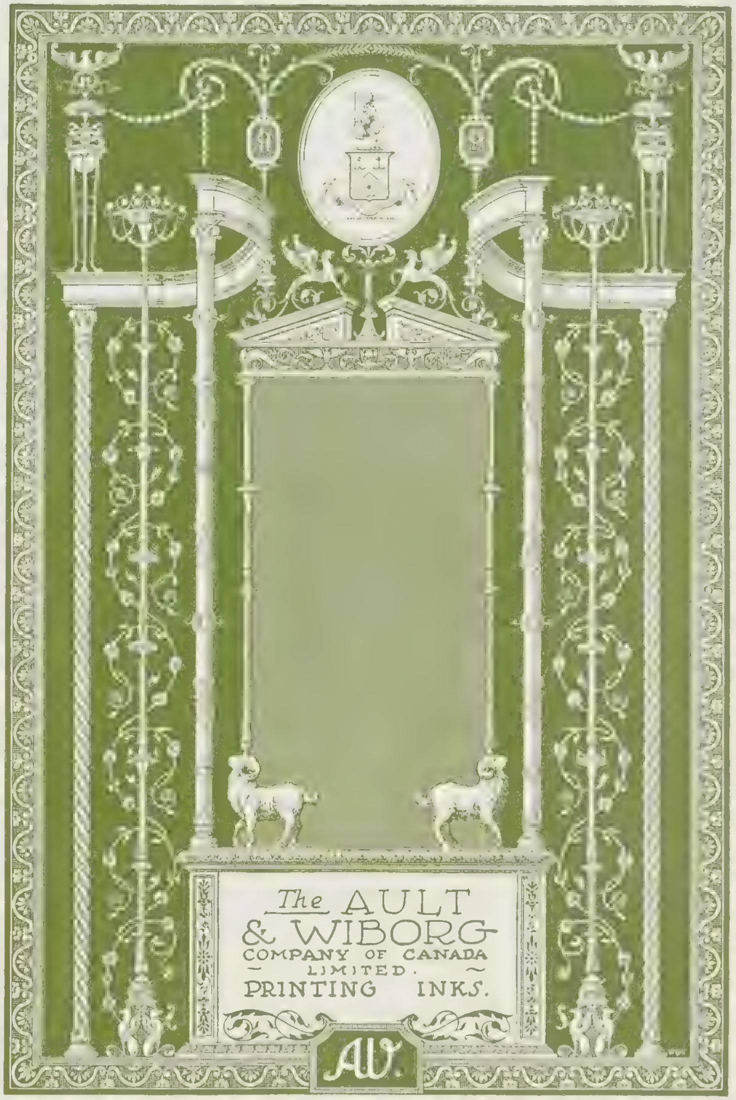
Green Lake, 12657



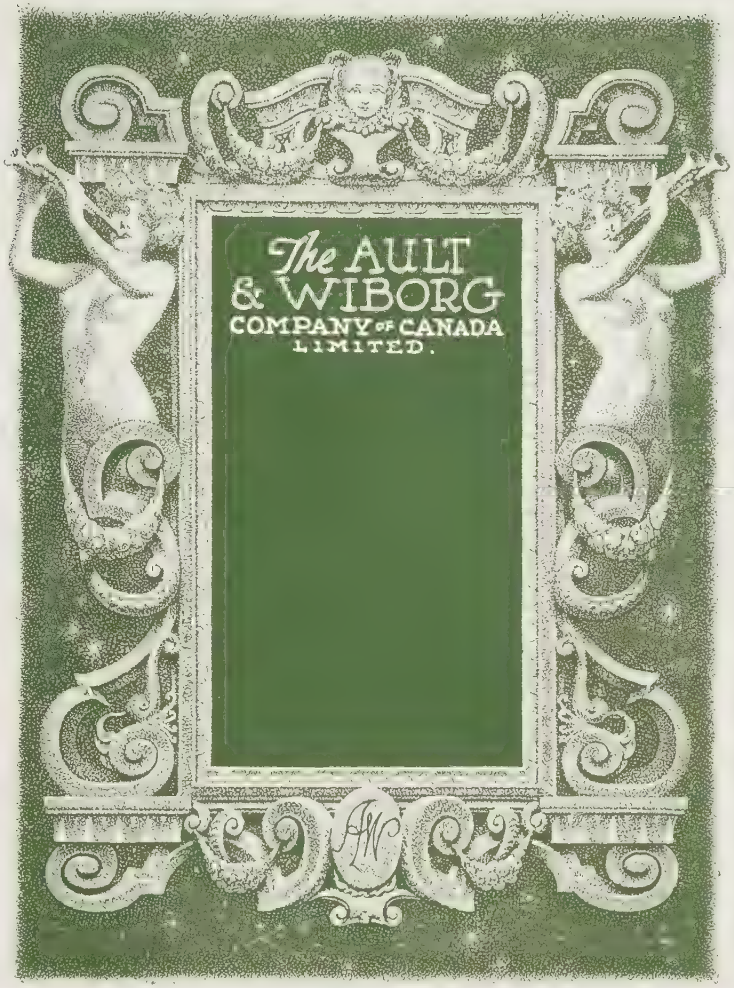
Shamrock Green, 13539



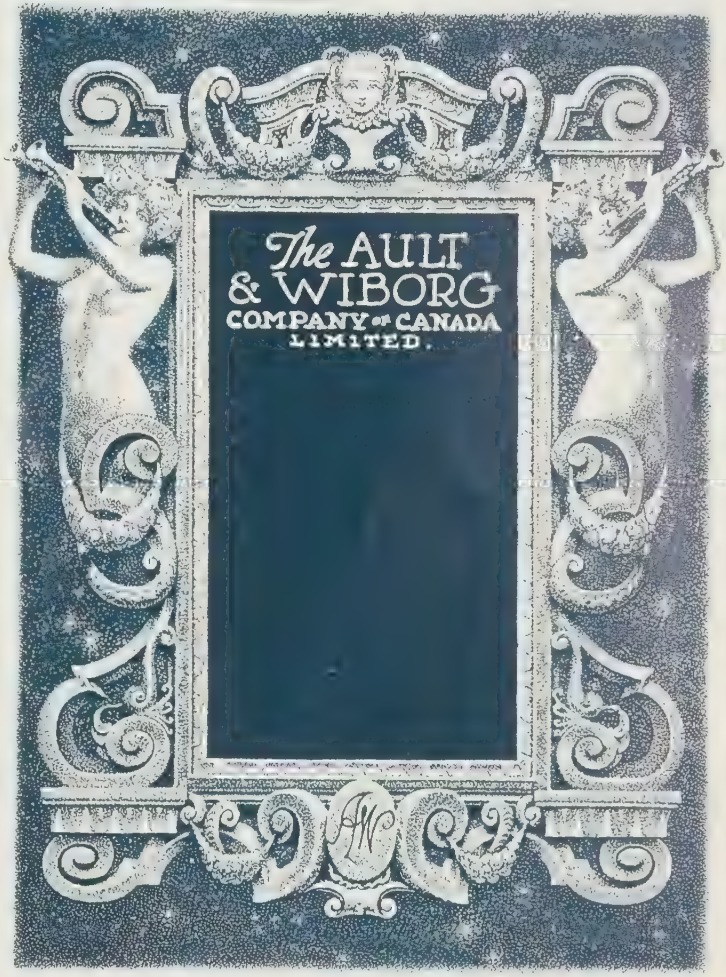
Olive Green, Light 13569



Olive Green, Medium 13589

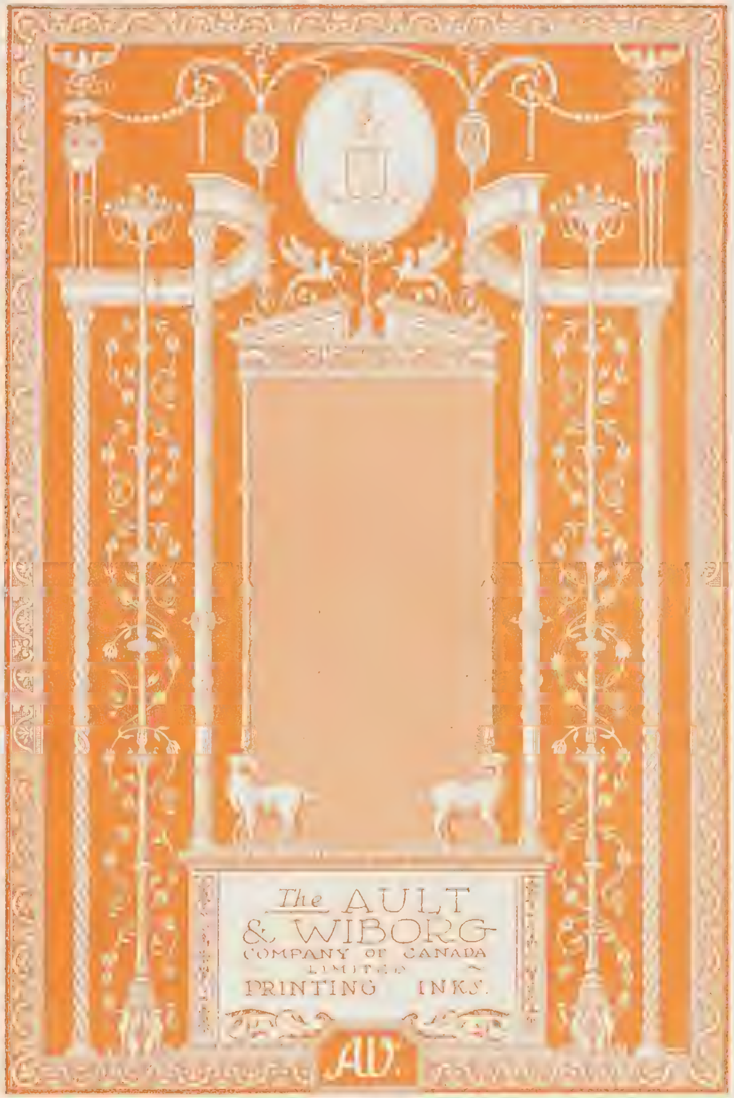


*Olive Green, Deep 13488*

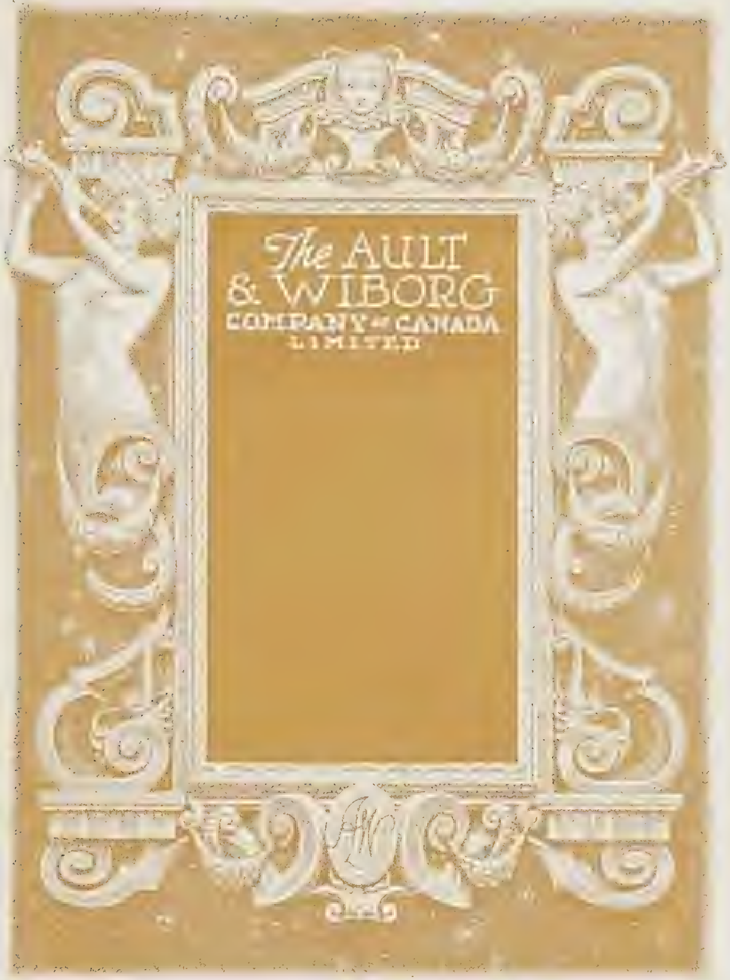


*Ex. Dark Green, 12463*

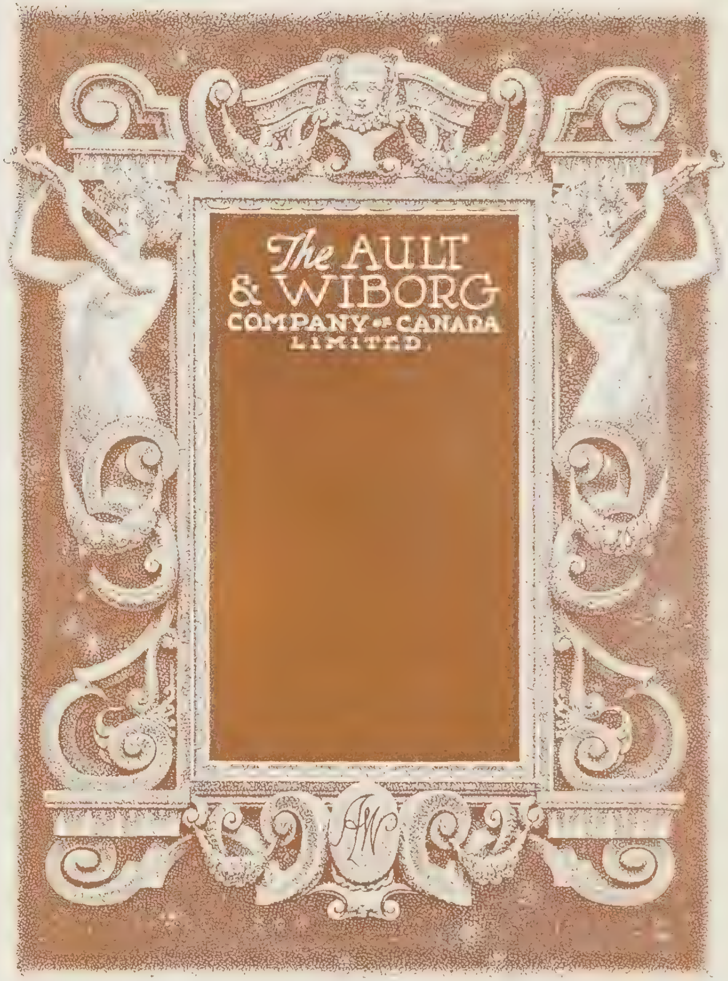
[illegible]



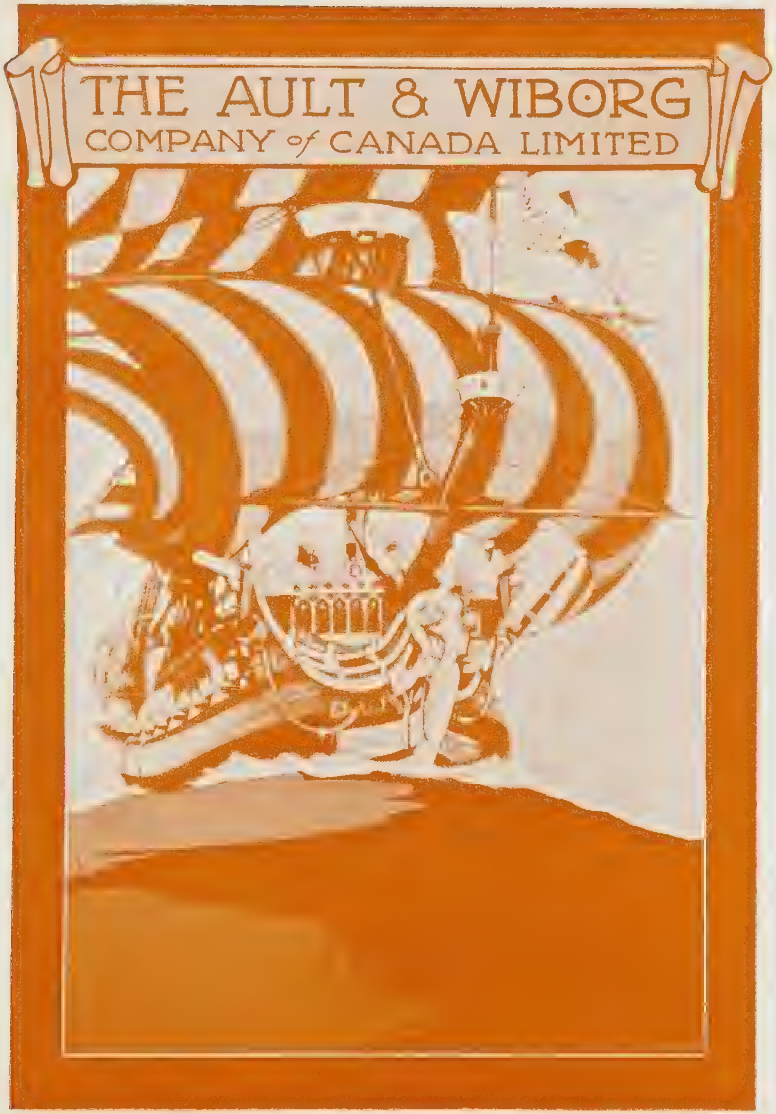
*Burnt Sienna, 13603*



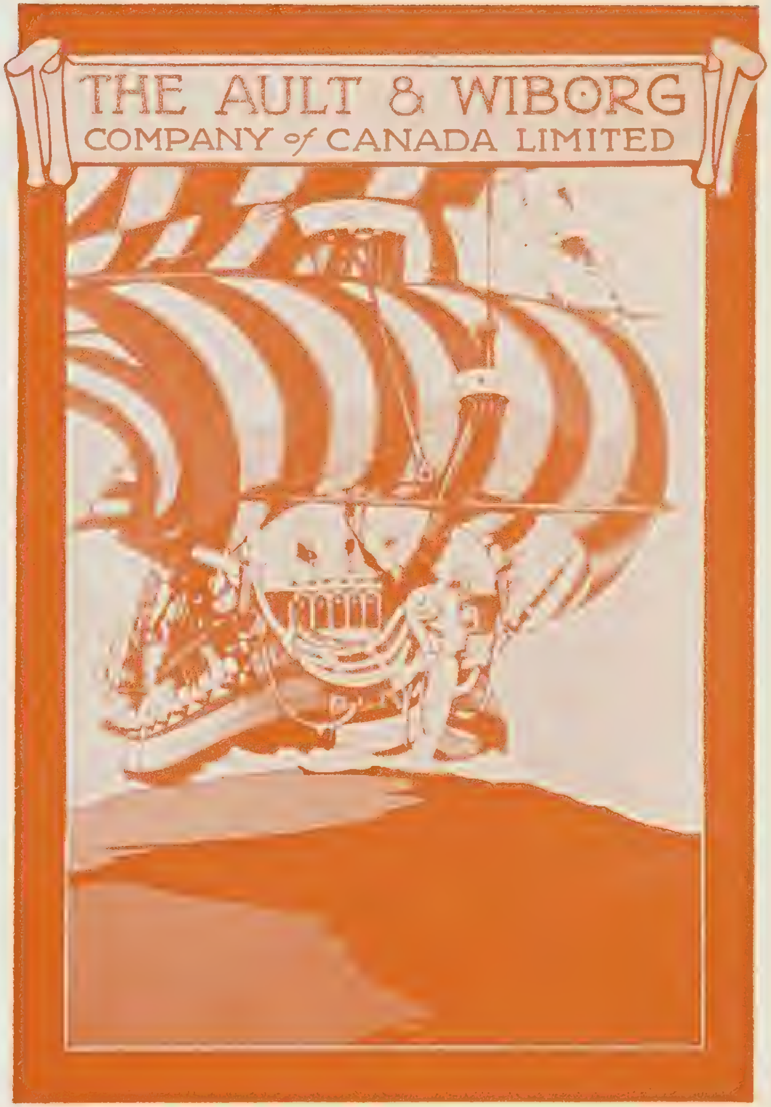
*Raw Umber, 11003*



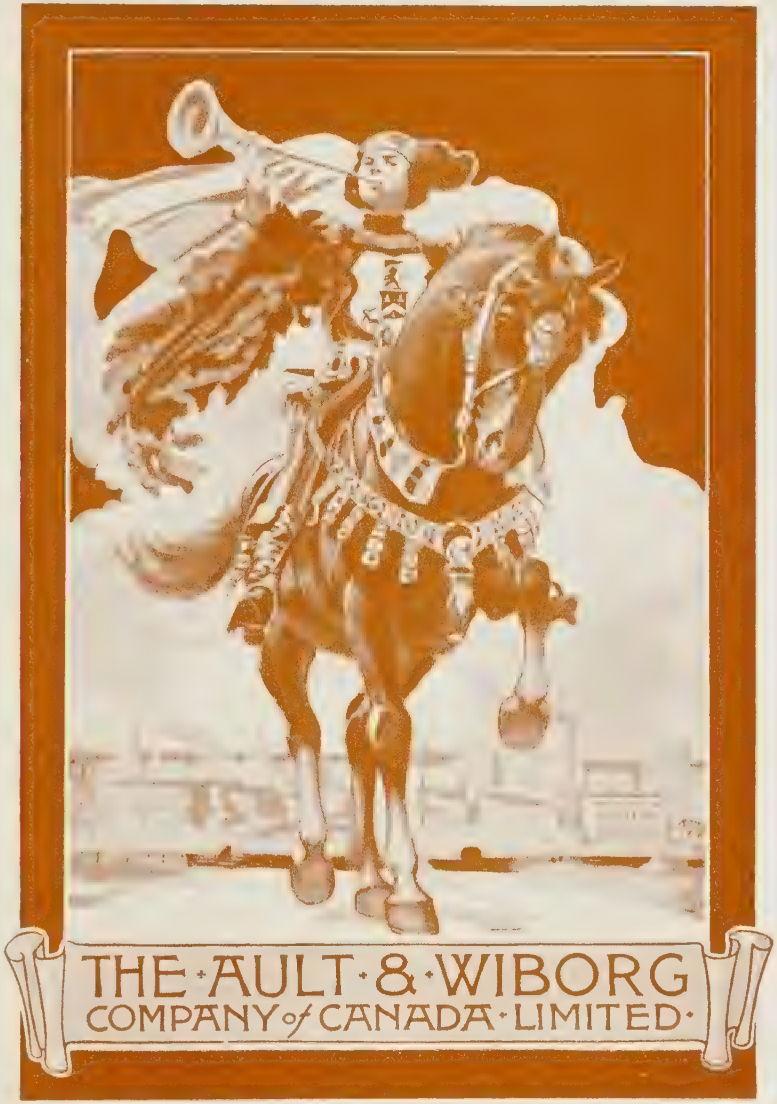
*Burnt Umber, 10989*



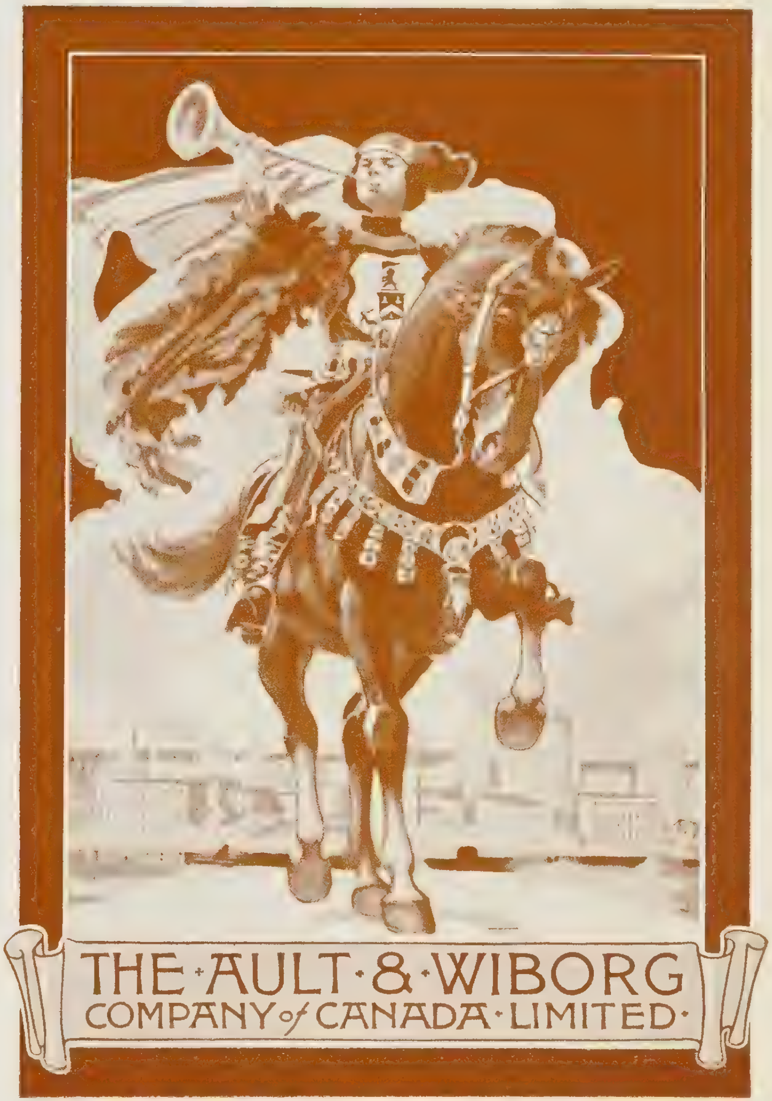
Light Brown, 13617



Carmine Brown, 9059



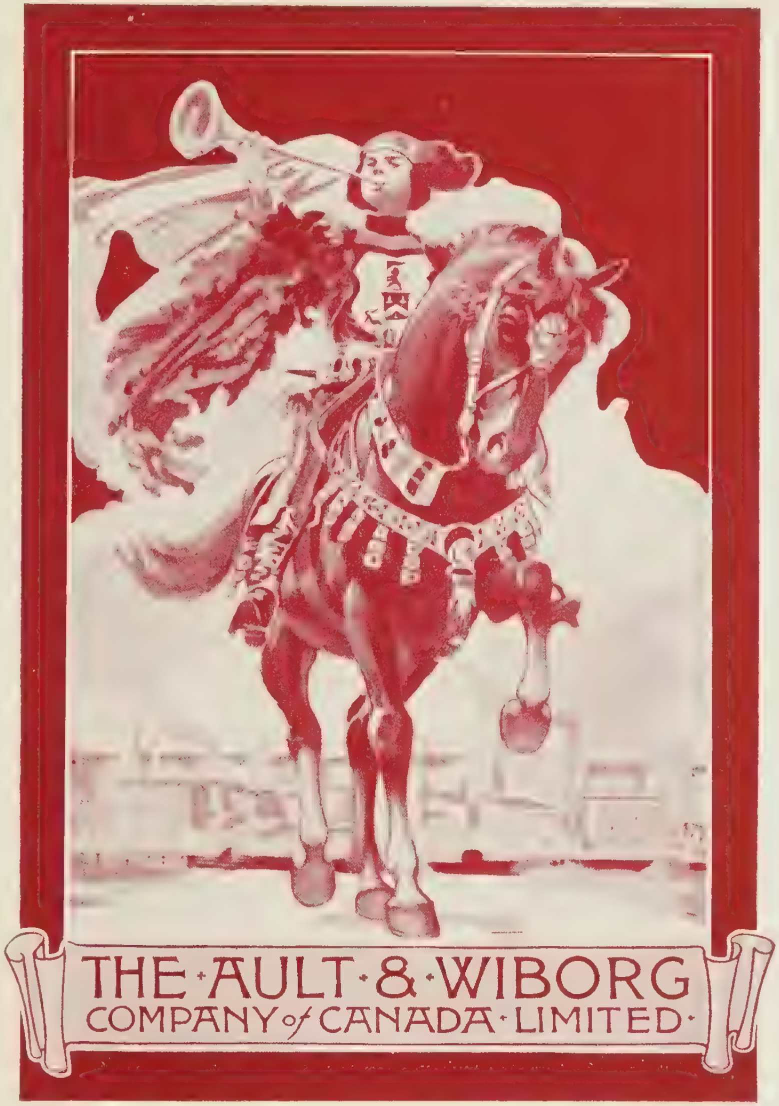
*Y. S. Brown 10551*



*Perfection Brown, 10205*

*Dark Brown, 10424*

*Chocolate Brown, 10200*



*R. S. Brown 13631*

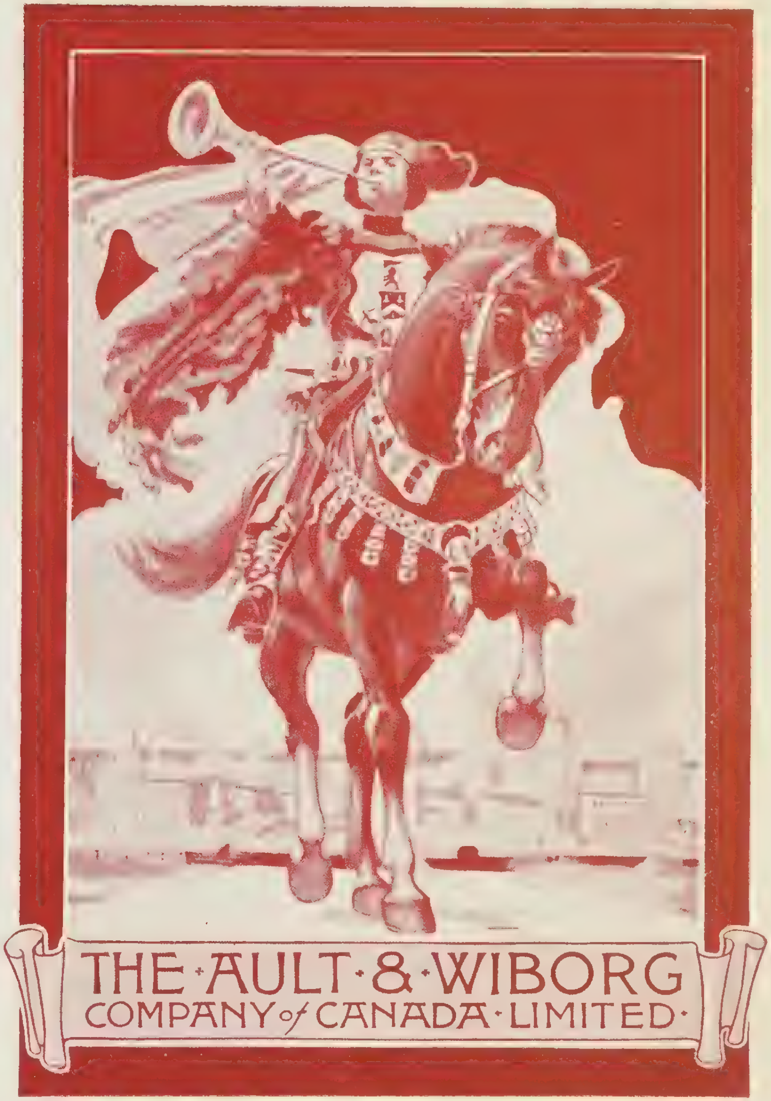
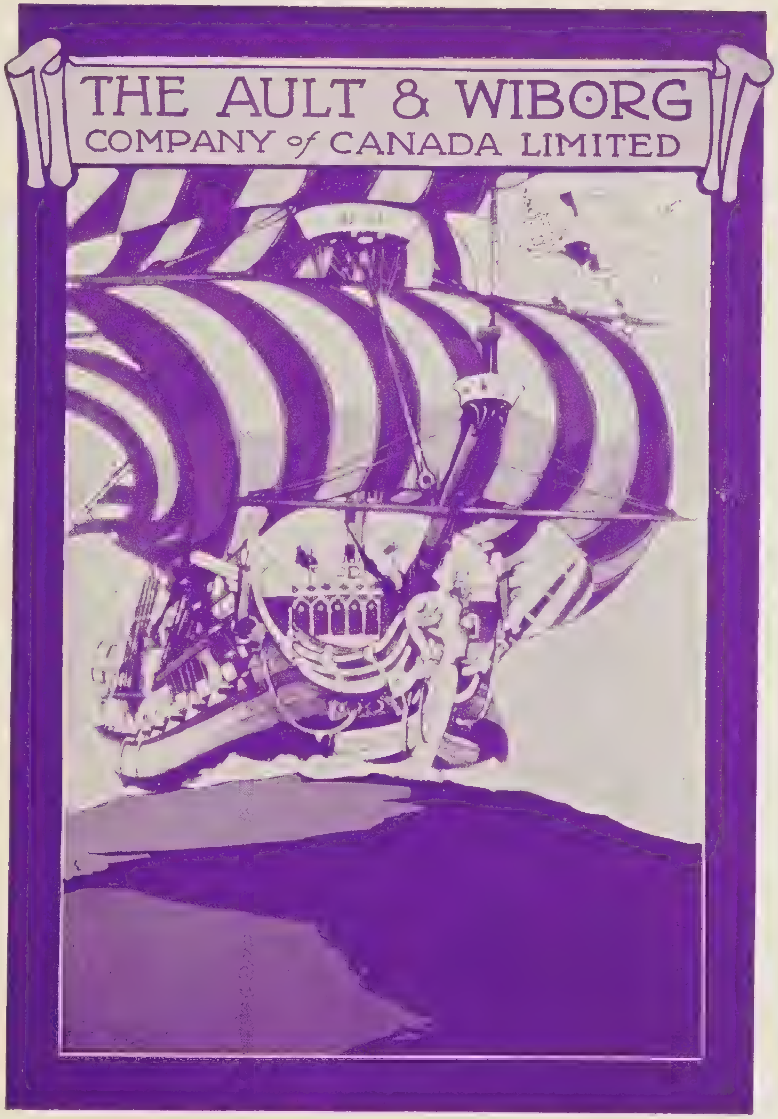
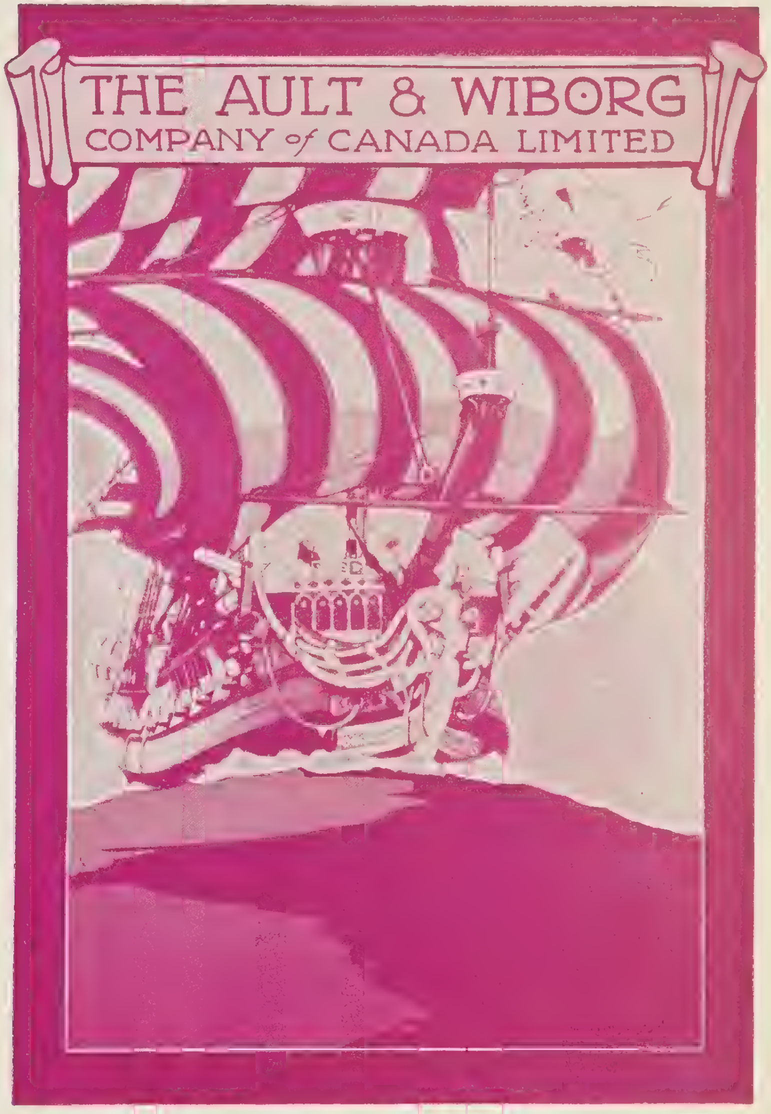


*Photo Brown, 13633*



*Purple B. 13627*



*Purple R. 13628*